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THE INNOVATION AND SHARING OF TEACHING PRACTICES I--A STUDY OF PROFESSIONAL ROLES AND SOCIAL STRUCTURES IN SCHOOLS. FINAL REPORT.

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IN A STUDY TO DETERMINE THE PERSONAL AND ORGANIZATIONAL CONDITIONS ASSOCIATED WITH INNOVATION AND SHARING OF CLASSROOM TEACHING PRACTICES, DATA WERE ANALYZED FROM A 95 PERCENT RESPONSE (473 OF 499 TOTAL) TO A SELF-REPORT QUESTIONNAIRE ADMINISTERED TO THE ENTIRE PROFESSIONAL STAFF OF THREE SCHOOL SYSTEMS COMPRISING 21 ELEMENTARY AND SECONDARY SCHOOLS IN SOUTHEASTERN MICHIGAN. FINDINGS INDICATE THAT TEACHERS WHO FEEL THAT THEIR OWN PERSONAL POWER AND THAT OF THEIR COLLEAGUES IS INFLUENTIAL IN SCHOOL DECISIONMAKING PROCESSES ARE MORE OFTEN INVOLVED IN INNOVATING AND SHARING. TEACHERS WHO ARE MORE INTIMATELY INVOLVED IN PROFESSIONAL EXCHANGE TRANSACTIONS WITH THEIR COLLEAGUES ARE ALSO MORE LIKELY TO BE HIGHLY INVOLVED IN INNOVATING AND SHARING. STAFF FEELING THAT THERE IS STRONG PRESSURE TO CONFORM TO SCHOOL NORMS AND PROCEDURES IS NEGATIVELY RELATED TO INNOVATION. FINALLY, INNOVATIVE TEACHERS SEE THEIR PRINCIPAL AS INSURING PROFESSIONAL AUTONOMY BY MEDIATING EXTERNAL PRESSURES AND PROVIDING FREEDOM FROM INTERNAL PRESSURES. THE SHARING OF CLASSROOM PRACTICES REQUIRES SOME MECHANISM FOR INFORMATION PROCESSING AMONG PEERS WHILE INNOVATION DOES NOT. IMPLICATIONS OF THE STUDY ARE SUMMARIZED AS AIDS IN THE PLANNING OF EDUCATIONAL CHANGE PROGRAMS. (JK)

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July 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Project No. 2636
Contract No. OE 5-10-241

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July 1967

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General Preface

This report is one of a pair that is concerned with the improvement of educational practice in the classroom. One report primarily concentrates upon the diagnostic research task of determining personal, interpersonal and organizational conditions facilitating the innovation and sharing of teaching practices; the other concentrates upon development of designs for the utilization of this knowledge to improve classroom teaching.

If the process of educational improvement occurs within the classroom, it is usually because the teacher is oriented toward change and feels free to invent and try out new ideas and procedures that seem to be needed and appropriate. Some teachers are educational inventors - change creators - and others are not. But regardless of personal qualities, no single practitioner can be expected to be the major source of new ideas and procedures in such a complex field of technology as the teaching of children. Much of the growth in professional competence must be supported by others and often imported from others' discoveries.

What are the characteristics of teachers which are associated with high or low inventiveness? What are the organizational characteristics of schools in which teachers feel free to experiment with their own creative ideas and tap the relevant resources of others? These are the foci of our first report analyzing some of the personal, inter-personal and organizational factors which facilitate and/or inhibit the innovation and spread of creative teaching practices.[1]

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[1] Chesler, M. and Barakat, H. The Innovation and Sharing of Teaching Practices I: A Study of Professional Roles and Social Structures in Schools, Cooperative Project 2636 (OE 5-10-241).

The process of the identification, spread and utilization of such practices requires that innovations by school building peers, neighboring schools or school systems, and University research and development centers must become visible, relevant, and usable. The development program described in our second report, documents efforts to develop procedures to help teachers and school systems facilitate and spread creative teaching.[2] Both projects were supported by grants from the Bureau of Elementary-Secondary Research, U.S. Office of Education: Cooperative Research Program projects #D-137 (Stimulating adoption and adaptation of selected classroom teaching practices) and #2636 (Diffusion of new classroom practices). In both reports the fruit of three years work has taken us far beyond the possibilities implicit in the original contract titles. Therefore, these reports bear titles different from the original contract, and the titles are deliberately similar to stimulate reader consideration of the two reports as one integrated effort.

Although the two projects had the same senior staff leadership, there were often sharp differences of identity and orientation of those who viewed themselves as "the researchers" and those who were "the action people." This division of team identity was of course supported by the separated funding of the two projects. At various points in the development of research and action efforts these separations of personnel and orientation resulted in conflict and confusion about priorities within the staff; some of these problems will be apparent in these reports. But we believe that the more dominant fact is that the staff of both projects often overlapped functionally, thus enriching our entire effort by their creative interrelatedness as well as their disagreements. Moreover, the entire staff did have a "research and action" commitment to the idea that education, or any other field of practice, can be improved best by combining basic research interests and theory with experimental action and evaluation inquiry and the skill of expert practitioners.

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[2] Robert Fox and Ronald Lippitt. The Innovation and Sharing of Teaching Practices II: Procedures for Stimulating Adoption and Adaptation of Selected Teaching Practices. Final Report, U.S. Office of Education. Cooperative Research Project No.D-137. . Ann Arbor: Institute for Social Research, The University of Michigan, 1967

The teamwork required to carry out these projects included a number of creative and energetic people. In addition to the co-authors of this report, Mark Chesler and Halim Barakat, other collaborators have included Donald Dennerll, Eileen Entin, Mary Flanders, Robert Fox, Jeannie Lee, Ronald Lippitt, Jack Logan, Stanley Morse, Susan Swap, Orian Worden. The secretarial work has been organized by Karen Donahue, Pat Alting and Evelyn Feinberg. The superintendents, principals, and teachers of participating school systems are deserving of an extra vote of thanks for their efforts to experiment with the collection, analysis and utilization of scientific efforts in their schools. Without the dedication of those teachers and administrators who took leadership in professional growth activities there would have been no project, and little cause for optimism about future plans for educational improvement.

TABLE OF CONTENTS

Preface ii

Table of Contents V

List of Tables vii

List of Figures xii

Chapter Page

I. Introduction 1
   The Character of Innovation and Sharing 3

II. Teaching Innovations and School Conditions 8
   The Study of School Conditions 11
   The Staff and Social Structure of the School 14
   Teacher Alienation and The School 19
   The Principal 28
   Summary of School Conditions and Innovation and Sharing 32
   Sample and Methods of this Study 34

III. Personal Characteristics of Innovations and Sharers 44
   The Independent Variables Investigated 44
   Demographic Characteristics and Innovation and Sharing 47
   Personal Styles and Innovation and Sharing 58
   Commitment to the Teaching Profession 71
   Professional Orientation 76
   Summary of Personal Characteristics 94

IV Colleague Interpersonal Relations 97
   Alienation from School 99
   Power and Influence Relations 106
   Interpersonal Attraction and Cohesiveness 119
   Participation in Professional Exchange 129
   Summary of Interpersonal Relations 145

Chapter Page

V The School Climate: The Organization As a Unit 149
The Measurement of Organization Variables 150
Sociometric Choice Patterns 157
Staff Attitudes Regarding Organizational Climate 164
Staff Consensus and Dissensus 169
Summary of the Organizational Climate 174

VI Teacher-Principal Relations 180
Staff Views of the Principal 183
Principal Background and Orientation 193
Principal-Staff Congruence 200
Summary of Teacher-Principal Relations 206

VII Summary 209
Summary of the Findings 210
Implications for the Planning of Change 216

Bibliography 220

Appendix A - Part I
Teacher Instruments

Appendix A - Part II
Teacher Instruments

LIST OF TABLES

TABLE PAGE

1. Innovation Related to Sharing by Teacher's Level of Instruction 37

2. Source of Innovation by Level of Instruction 39

3. Behavioral Orientation of Innovation by Level of Instruction 42

4. Demographic Characteristics of the Sample by Level of Instruction 48

5. Number of Children Related to Innovation 50

6. Number of Children Aged 0-4 Related to Source of Innovation 50

7A. Rural-Urban Background Related to Innovation 52
7B. Rural-Urban Background Related to Sharing 52

8. Church Attendance Related to Sharing 53

9. Educational Training Related to Behavioral Orientation of Innovation 55

10. Educational Training Related to Behavioral Orientation of Innovation by Level of Instruction 55

11. Educational Specialty Related to Sharing 57

12A. Positive Orientation to Change Related to Innovation 60
12B. Positive Orientation to Change Related to Sharing 60

13A. General Alienation Related to Innovation 63
13B. General Alienation Related to Sharing 63

14A. General Anomie Related to Innovation 65
14B. General Anomie Related to Sharing 65

15. Summary of Chi-Square Tabulations Relating Three Dimensions of Personality Style 66

16. Summary of Teachers' Priorities of Social Motive 68

17. Summary of Chi-Square Tabulations Relating Social Needs to Innovation and Sharing 70

TABLE PAGE

18. Teaching Experiences Related to Innovation and Sharing.......... 73

19. Experience Related to Source of Innovation by Level of Instruction.......... 75

20. Teacher Choices of School System Objectives.......... 78

21A. School Objectives Related to Innovation.......... 79
21B. School Objectives Related to Sharing.......... 79

22. Most Important School Objective Related to Source of Innovation.......... 81

23. Perceived School Priorities by Level of Instruction.......... 83

24. Desired School Priorities by Level of Instruction.......... 85

25. Classroom Planning Dimension Related to Behavioral Orientation of Innovation.......... 88

26. Percent of Time Spent on Varied Tasks During Average Day.......... 90

27A. Time Spent Teaching Academic Material Related to Innovation.......... 92
27B. Time Spent Teaching Academic Material Related to Sharing.......... 92

28. Summary of Chi-Square Procedures Relating Subscales of Alienation from School.......... 102

29. Alienation Related to Level of Instruction.......... 104

30A. Alienation Related to Innovation by Level of Instruction.......... 105
30B. Alienation Related to Sharing by Level of Instruction.......... 105

31A. Perceived Personal Influence Related to Innovation.......... 110
31B. Perceived Personal Influence Related to Sharing.......... 110

32A. Perceived Colleagues' Influence Related to Innovation.......... 112
32B. Perceived Colleagues' Influence Related to Sharing.......... 112

33A. Sociometric Nominations of Influence Related to Innovation.......... 114
33B. Sociometric Nominations of Influence Related to Sharing.......... 114

TABLE PAGE

34. Various Influence Measures Related to Alienation............ 117

35A. Staff Diagram Related to Innovation......................... 122
35B. Staff Diagram Related to Sharing............................ 122

36A. Impersonal Staff Relations Related to Innovation............ 124
36B. Impersonal Staff Relations Related to Sharing............... 124

37A. Sociometric Nominations of Liking Related to Innovation.. 126
37B. Sociometric Nominations of Liking Related to Sharing........ 126

38. Attraction Dimensions and Alienation from School............ 127

39A. Sociometric Nominations of Communication Related to Innovation... 131
39B. Sociometric Nominations of Communication Related to Sharing.. 131

40A. Travel to School Related to Innovation...................... 133
40B. Travel to School Related to Sharing......................... 133

41. Travel to School Related to Source of Innovation............ 134

42A. Time Spent Talking About Classroom Practices Related to Innovation.................................... 136
42B. Time Spent Talking About Classroom Practices Related to Sharing....................................... 136

43A. Time Spent on Committees Related to Innovation.............. 138
43B. Time Spent on Committees Related to Sharing................. 138

44A. Membership in Professional Associations Related to Innovation.. 140
44B. Membership in Professional Associations Related to Sharing... 140

45. Attendance in Educational Meetings Outside the School System Related to Behavioral Orientation of Innovation... 141

46. Professional Exchange Dimensions and Alienation from School.. 143

47. Staff Percentages and Means and School Ranks on Innovation and Sharing.................................. 154

48. Centrality-Diffuseness of Sociometric Patterns Related to Staff Innovation and Sharing.................. 159

TABLE PAGE

49. Correlation of Sociometric Patterns Related to Innovation and Sharing.......... 161

50. Mutuality in Attracton and Communication Choices Related to Innovation and Sharing.......... 163

51. Staff Means of Teachers Perceived Influence Related to Staff Innovation and Sharing.......... 165

52. School Discrepancy Between Teachers Perceived and Desired Personal Influence Related to Innovation and Sharing.......... 165

53. Staff Means of Perceived Demand for Conformity Related to Staff Innovation and Sharing.......... 168

54. Agreement on Staff Diagram Related to Staff Innovation and Sharing.......... 171

55. Agreement on School Objectives Related to Staff Innovation and Sharing.......... 171

56. Agreement on Demands for Conformity Related to Staff Innovations and Sharing.......... 173

57. Staff Mean and Variance Scores for Teacher Influence on the Curriculum.......... 178

58A. Teacher Perception of Principal Professional Support Related to Innovation.......... 185

58B. Teacher Perception of Principal Professional Support Related to Sharing.......... 185

59A. Teacher Perception of Principal Sharing of Power Related to Innovation.......... 187

59B. Teacher Perception of Principal Sharing of Power Related to Sharing.......... 187

60. Summary of Chi-Square Tabulations Relating Teachers' Perceptions of Principal Behavior to Alienation From School.......... 189

61A. Teachers' Perception of Principal's Upwards Influence Related to Innovation.......... 191

61B. Teachers' Perception of Principal's Upwards Influence Related to Sharing.......... 191

62A. Teachers' Perception of Principal's Downwards Influence Related to Innovation.......... 192

62B. Teachers' Perception of Principal's Downwards Influence Related to Sharing.......... 192

TABLE PAGE

63. Principal Priority on School Objectives of Increasing Motivation to Learn and Academic Achievement Related to Staff Innovation and Sharing 194

64. Principal's Role Orientation with Teachers Related to Staff Innovation and Sharing 196

65A. Principal's Perception of His Own Upwards Influence with the Superintendent Related to Staff Innovation and Sharing 199

65B. Principal's Perception of His Own Downward Influence with Teachers Related to Staff Innovation and Sharing 199

66. Principal-Staff Congruence on Communication Sociometric Related to Staff Innovation and Sharing 202

67. Principal-Staff Congruence on Influence Sociometric Related to Staff Innovation and Sharing 202

68. Principal-Staff Congruence on Liking Sociometric Related to Staff Innovation and Sharing 202

69. Principal Response to Request for Identification of Staff Innovators Related to Staff Innovation and Sharing 204

70. Principal-Staff Congruence on the Ways Teachers Spend Their Time Related to Staff Innovation and Sharing 204

LIST OF FIGURES

FIGURE PAGE

1 Representation of Internal Structure and Role Behavior.. 33

2 Distribution of Teacher Responses by School................. 35

3 Teachers Perceptions and Preferences of Various Parties' Influence on School Policy............... 109

4 Principal Perceptions and Preferences of Various Parties' Influence on School Policy....................... 197

CHAPTER I

INTRODUCTION

A major aspect of the teaching role is constant flexibility, imagination and change in teaching technique and method. The classroom teacher often has to present new material in new ways to new students. If he didn't vary and constantly improve upon his procedure, he could not adapt effectively to students' changing needs and behaviors in the classroom. This is the essential reason innovations in teaching style and content occur despite the potential barriers established by self, peer relations and school authorities. In addition to interpersonal barriers, numerous demands are placed upon the teacher to accomplish a variety of administrative and time-consuming tasks, as well as for teaching to be standardized and related to tried and tested patterns. As we have changed from one-room schoolhouses to larger community schools, increased organizational demands have been placed upon teachers and principals. Time and energy limitations, administrative duties, and aspects of the peer and authority systems may well inhibit the development of flexible and creative teaching.

When educational innovations have been subjected to scientific scrutiny, the emphasis has been placed most frequently upon the innovation itself, rather than upon the conditions within persons and systems involved in its invention and diffusion. Miles notes this trend in decrying "the popular view that the content or demonstrated efficacy of a particular educational innovation, as such, is the crucial thing in determining whether or not it will be adopted and used effectively." (1965, p. 13). It is not our contention that characteristics of innovations are unimportant; but that organizational features of the school, which are seldom examined, are also crucial.

One result of the inhibition of teacher innovation and sharing is that the job of developing innovative classroom practices and disseminating them to teachers is undertaken by other persons, or even by other institutions outside the school. Principals seldom have the time or energy to do this; neither do most higher level administrators. It is often left to curriculum specialists or academicians to focus upon new methods and materials, as well as to interest teachers in their use. Scientists and administrators concerned with the innovation and spread of educational ideas most often see teachers as the target group to be molded, changed or influenced. Teachers seldom are seen or treated as the source of new ideas and practices or the creative adapters of worthwhile experiments. In fact, in the forward to Miles' book, *Innovation in Education* (1964), Foshay describes nine groups of people actively involved in educational innovation. None of these groups is teachers!

This strategy of specialization of change efforts has many economical features, but it also creates several problems. In the first place, many appropriate new methods are bound to come from those practitioners closest to the classroom, and not those far removed from the scene. Further, teachers may need to feel and demonstrate their own sense of esteem and professional competence, and may do this by rejecting or sabotaging ideas coming into the system from the outside. Recent experience in professional settings suggests that many good ideas may develop from the bottom up, rather than from the top down. Ideas that do start from the bottom--from teachers' experiences--may have a greater chance of being accepted and actually used by teachers in their own and others' classrooms. When ideas are freely shared, other teachers can help refine suggested practices and modify them for use in their own classrooms. This pattern of innovation and communication flow takes full advantage of creative teachers' professional skill at the same time it helps create a climate for democratic participation in educational improvement. It also places teachers in an active inventive and influence posture, rather than in a passive receptive role. When teachers do not share their professional inventions and reactions with their colleagues, they cannot and do not contribute to each other's growth and competence. The educational enterprise is thereby deprived of a prime source of skill, expertise and quality control.

This, then, is the central problem for our work. What conditions encourage meaningful and effective teaching innovations? Under what school conditions do teachers share their new ideas with their colleagues or adapt and adopt colleagues' ideas for themselves? What is the effect of the organizational context--varying peer patterns and principal-staff relations--in schools? How can we utilize our knowledge about these conditions to facilitate greater innovation and sharing? How can these school-organizational conditions be manipulated to improve education?

The Character of Innovation and Sharing

What is an innovation? And what is a teaching innovation? What does it mean to share an innovation? An innovation is best described as something new, either in terms of a process for doing something, or as a product which can be used. Sharing involves the passing on of that innovation in some exact or modified form to others. It does not mean that others actually use it, but that they know about it.

The scientific study of innovation and diffusion has flourished most widely in the fields of pharmacy and agriculture. Many studies in these areas are summarized by Rogers (1962) and Katz and his colleagues (Katz, 1961; Menzel and Katz, 1955). In the drug industry studies, the innovation is characteristically a pharmacological discovery or operation. The brunt of the research concentrates not upon the discovery process, but upon the diffusion of the innovation. Similarly, the great majority of the studies reported by Rogers are essentially concerned with what happens after a new farming practice is invented - how it is received and initiated, or modified and used or rejected by others. He states, in fact, that "Innovators are the first members of a social system to adopt new ideas." (1965, p. 55). In this study our concern is not solely with the processes of sharing and adoption. It is also with the conditions that surround the process of innovation and public awareness of its existence. Once an innovation becomes public it can be shared with others, and thus begins the diffusion process. Sharing leads to further diffusion and the potential acceptance of the innovation by others.

Studies of innovation in education have not focused, in the way the drug and farm studies have, upon the individual practitioner's behavior. They have been much more concerned with new programs that have been invented or created for system-wide adoption. In those instances where teacher behavior is a concern, teachers are not conceptualized as active agents in a change or utilization process, but as targets of someone's influence attempts. (Guba, 1966; Pellegrin, 1966). In such analyses and programs the key personnel are "gate keepers"; superintendents, curriculum coordinators and sometimes principals. This trend in research and practice is also reflected in Miles' (1964) outstanding compendium of education innovations and innovation research. The sole article in this volume that does deal with teachers' innovations is by Fox and Lippitt (1964).

In this study we are not concerned with new system-wide programs and policies. Rather we are concerned with the teaching practices the individual teacher reports he uses in his own classroom. The meaning we give to innovation is defined by the teacher's perception, and sometimes by that of a colleague, that he is using a technique new for him. It is, of course, possible that what is new to one teacher is not new to another. But if it is new to the inventor it does represent his creative power at work, and is therefore worthy of our attention. In this regard we distinguish between several types of innovations according to their source; a self-invention, a practice adopted directly from someone or somewhere else, or an adaptation or modification of another practice.

It is also problematic to rely on teachers' self-reports of their behavior; it is possible that a teacher's self-report may not be congruent with his actual behavior. In some cases peer reports call attention to this gap between saying and doing, or at least between doing in private and doing in public. In these instances some of the potential distortions of self-reports can be controlled. Further distortions can be controlled by objective evaluation of reported innovations. We have further limited the meaning of innovation by concentrating upon those practices which are designed to improve the classroom learning climate, thereby de-emphasizing systemic innovations such as new texts, curricula and school-wide tracking, and mere classroom gimmicks such as bulletin boards, new marking procedures, roll books or library content.

As we have already suggested, in almost no area of organized human interaction is innovation as important as in the teacher-learner transaction.

Its very importance, coupled with the peculiar environmental setting within which it occurs, makes the innovative act in education markedly different from the process in agriculture or medical institutions. In both of these latter areas of social practice the products--more farm yield, faster healing, higher profits--are visible and often assessable. In education this is seldom the case. As a result of often inadequate goal statements, lack of goal consensus, and infrequent evaluation and assessment, there are few clear ways to know and agree upon what is working well, better or best in education. The goals of education are seldom precise and seldom agreed upon by various groups of professionals or the lay public. The public educational system deals with such cultural pluralism by accepting the goals and styles of many groups and not by promoting controversy or hegemony with unequivocal value commitments. This lack of goal precision and consensus makes the systematic evaluation of student growth, and evaluation of the teacher's contribution to this growth, very difficult.

The character of educational innovation and adoption or adaptation is also often different from innovation in technological areas. Given the relevance and plurality of values in the educational setting, a new practice often involves not only new habits or skills on the part of the practitioner, but new attitudes and moral commitments as well. Since each classroom procedure implies certain learning goals, goal reorientation may be an essential part of a change in this procedure.

Most teachers are committed to doing a good job in the classroom; many spend extra hours and energy improving their skills and abilities. Since it appears to us that increased professional competence goes hand in hand with a greater personal repertoire of teaching styles, and thereby the willingness to innovate in the classroom, we see innovation and communication of innovation as a part of the teacher's professional role. The critical questions for us are: Under what organizational conditions are teachers encouraged to develop and publicize this role? What conditions and procedures will facilitate effective spread and utilization of the innovations of others? This question of procedures and spread of new practices naturally takes us into the question of networks of diffusion. Is it possible to organize effective spread within a building? Within a state system? A professional society? The national educational establishment? What conditions of administration and organizational structure are necessary to support the development and maintenance of these procedures?

We hope this report and its companion report* make a contribution to the challenging tasks posed by these questions.

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* Robert Fox and Ronald Lippitt. The Innovation and Sharing of Teaching Practices II: Procedures for Stimulating Adoption and Adaptation of Selected Teaching Practices. Final Report, U. S. Office of Education. Cooperative Research Project No. D-137. Ann Arbor: Institute for Social Research, The University of Michigan, 1967.

CHAPTER II

TEACHING INNOVATIONS AND SCHOOL CONDITIONS

It is fashionable in these times to be concerned about the character and structure of American education. People so concerned range from philosophers and social scientists, through professional and lay leaders, to parents and children themselves. The focus of concern may be the nature of the curriculum, the training of teachers, the place of religious and moral ideology in class or the need to better serve minority populations. Other foci of concern may include the institutions performing educational services; their funding operations, the place of lay or porfessional controls, the role of professional unions and agencies, and the social organization of teaching and learning. As the principal public agent entrusted with the task of socializing our youth, the American public school system is a critical and vulnerable societal institution. Moreover, it is largely a professional institution, with almost all its personnel carefully and specifically trained to influence and manage their roles with a large and varied clientele.

When the local school building or school district is conceived as a social system, several critical points of inquiry and leverage for change become prominent. One central point is the relationship between this and other societal institutions and the interchange the school system has with other institutions. First of all the school is related to other youth-serving agencies in the local community, as well as to mainstream political, economic and moral systems. Clearly schools depend upon the community for economic and political support as well as a marketplace for the employment or future training of its charges. Many of these institutions jointly plan how to make available and expend community resources and opportunities. Inasmuch as administrators and teachers spend much of their time outside of the school, they represent an opportunity for constant interchange and interaction between the school and the non-school world. The students themselves, both the raw materials and end product of educational processes, represent another exchange link with the world outside.

Another central point is the character of internal social relationships within a school or school system. Within a school system the various member schools and their representatives interact with a hierarchy of managers and administrative supervisors. In addition, within each school there are complex organizational and interpersonal relations that must be managed effectively. Office staffs must serve in ways that do not divert or dominate the school's professional mission. Teachers must be encouraged and supported to collaborate with one another. Principals must devise ways of providing administrative, professional and socio-emotional leadership to the diverse population of this complex social system.

Finally, of course, there are the critical interactional episodes between teachers and students, partners in the teaching-learning process. Both partners must somehow contrive to be open and responsive to one another so that mutual adjustment and growth can occur. Teachers must decide how to interpret a common curriculum to fit their own styles and the diverse needs of their students. Students must be interested and encouraged enough by the classroom's activity so they truly invest energy in learning.

One of these broad major issues is explored in this study; the internal social relations among professional members of a school staff. That this is the only important problem of contemporary education is demonstrably untrue; that this is an important focus for potential scientific and educational developments is incontestable. Our focus on these relations may shed light on a number of other issues, all directly relevant to the success of the teaching-learning process. As Charters points out, any inquiry effort must attend to the combined effects of many variables in the educational setting: "The teaching-learning process of the classroom is, in a very real sense, subordinate to the social system of the school which, in turn, is only one of the components of the institutional structure of education. Forces which affect the school affect the conduct of the teaching-learning process." (1963, p. 716). If clear scientific findings could provoke a reformation in the relations among these organizational forces, it would facilitate greatly individual change by teachers and principals. Such scientific findings also would add to our growing knowledge of change strategies some reliable notions of the organizational context within which educational change takes place.

This study grows out of our earlier concerns with the nature of teacher-student interactions in the classroom (Schmuck, Chesler and Lippitt, 1966; Fox, Lippitt and Schmuck, 1964; Fox and Lippitt, 1964). In investigating the potential alternatives that teachers could pursue in the classroom we were struck by the relatively inflexible and private character of teachers' classroom behavior. This privacy was supported by the organizational relations in the school; what went on within one teacher's classroom was seldom known to other teachers or even to the principal. In many ways each classroom constituted a feudal domain, unseen and unshared by colleagues. Many teachers suggested that important barriers to their own growth and experimentation existed in their relations to peers and authorities. Some teachers felt their principals would not support new and varied content or methodology in the classroom, and others felt there was principal support for trying new ideas but clear collegial norms against experimentation (Chesler, Schmuck and Lippitt, 1963). Change at this level of staff interaction and feelings about interaction may be assumed to have considerable effect on teachers' professional behavior and their alternatives for classroom management.

The Study of School Conditions

Many schools of education sponsor courses in educational sociology and educational administration, and numerous textbooks have been written about the organizational and interpersonal life of the school. But the majority of these sources of professional concern and expertise are speculative and prescriptive in nature. They tell what to do in much the same way that student-teachers are told what methods they should use in their future classrooms. Both often suffer from a lack of attention to the behavioral science principles underlying the performance of roles and organizational functions. Methods of classroom instruction and school administration msut begin to acknowledge the empirical tests and results of social scientific investigations.

A number of insights and findings from behavioral science studies of organizations could well be applied to the educational setting. To a certain extent, of course, schools are not like factories, clubs, armies, gangs, work groups and the like. The lack of clear agreement on the goals of educational systems and the great variation of organizational inputs in the form of learners are markedly divergent from the conditions existing in most formal organizations. Moreover, the school is staffed by professionals; each teacher is an authority in his own classroom and in many ways his role performance is both invisible and independent of others. Social integration among staff members in educational systems is more often moral or normative than functional, thus making collaborative relations rare. Such differences long have provided educators with an isolation and protection from new knowledge and practice in the science of organizational development and management. Stressing their unique professional training and duties, many educational administrators have denied the relevance of findings from other institutional settings.

This study will attempt to investigate empirically some aspects of the social structure of public schools. It will not study all of the issues potentially at work, but a limited set of important relations. Moreover, that this study is limited to educational organizations does not mean that the relevance of the findings necessarily can be so limited. Inasmuch as we will freely draw concepts and variables from a broad range of social scientific studies of organizations, this study may well have considerable relevance to the comparative study of organizations.

The social structure of educational organizations cannot be understood best in the abstract, or with a mere typology of structures. These relations and roles can be investigated best when they are considered in relation to other important aspects of the educational enterprise. In this study we will investigate the relationship between certain structural conditions and two aspects of teachers' professional activity, teacher innovation in classroom practice and the sharing of these innovations with others. Most models of bureaucratic and administrative management have wrestled with the effects of bureaucratic forms upon individual flexibility and innovation in role behavior. March and Simon (1958) review, for example, several ways in which demands for standardization of rules and regulations, and supervisory necessities may inhibit individual freedom to operate and innovate. Nowhere, outside perhaps of scientific organizations, is the need for individual flexibility and innovation as great as it is in the school situation.

Although schools can be seen as examples of bureaucracies, they are particular kinds of bureaucracies, violating several rules of the classical models. For instance, in many ways teachers are not interdependent with each other in their work in the way other bureaucratic role occupants are. They do exist in the same social system and may eat and talk together, but their primary role behavior is only minimally coordinated or integrated with their colleagues. Interaction with students goes on behind closed doors; and in most elementary schools students remain largely with one teacher throughout the entire day. Thus students are not as great a vehicle for teacher to teacher interaction and interdependence in elementary schools as they may be in secondary schools. The expectation and preservation of autonomy and privacy often makes individual teachers fairly invisible to others in their core professional behaviors. The historical support for this pattern makes supervision a very ambiguously received activity; some teachers are glad to be supervised, others resist it as intrusion. As Bidwell points out, many "teachers tend to resist offical authority in the instructional area and to press for professional discretion." (1965, p.1014). Furthermore, a local school's operations and mangement are often subjected to control and direct influence from community forces. The potential of lay control of professional function of this public organization makes school personnel constantly attentive and often reactive to community pressures and concerns. These characteristics of the teacher's professional role and status help distinguish the school bureaucracy from other forms of bureaucratic organization. Other distinguishing characteristics include some we have already mentioned: the low degree of standardization of the input variables (students) and low agreement on appropriate output measures.

In this study we explore some of those personal variables and characteristics of the educational system and administrative bureaucracy that promote teacher alienation and disaffection. Then these characteristics are related to the existence of innovative teaching and staff sharing. These conceptualizations of the nature of innovation as both professional role behavior and as a means of adjusting to an educational bureaucracy are not mutually exclusive; in fact, they are treated here as complementary.

The Staff and Social Structure of the School

The staff of a school represents a social system involved in direct interchange relations with other social systems. It is linked to other elements of the total educational enterprise through students, families, public educational events, representatives to school boards and public agencies, and the like. It would be an error to think we can safely abstract the school from its environmental cradle. But at the same time, the internal staff relations of a school are critical elements themselves in the educational process. Our focus in this study upon the internal staff relations does in no way mean we wish to deny the community forces which shape and condition all the actions, theories and data reported and discussed here.

The various elements of the professional social system of the school that are the object of this study are the individual teachers, the peer relations among teachers, the principal, and the relations between the principal and teachers. While characteristics of the teachers and principal may be mainly a function of their personal styles conditioned in part by their training and experience, the relations between and among these elements are strongly imbued with role expectations and traditions. The major part of our concern here is with these relationships and roles.

Since educational research has only minimally focused upon teachers as innovators, there are almost no data available to suggest directly relevant hypotheses for testing in this study. However, Rogers reports that innovators in adopting farm practices tended to be younger than were later adopters (1965). We may expect that the same would be true of teachers (Carlson, 1965), and that younger teachers would also have less tenure and experience as professionals and as members of a school staff. Furthermore, we would expect them to hold positive values about flexibility in the teaching role, and an orientation to genuine educational improvement. Of course, personal styles and systemic norms interact to influence role behavior, and these individual preferences will be mediated by school standards.

Homans and others report ways in which informal peer relations may lead to the establishment of firmly held norms about productive output (1958; Coch and French, 1948). It is to be expected that this phenomenon occurs in the current context as well. In schools where public norms support innovative teaching and professional activity, we expect there will be a professional atmosphere that is more conducive to teacher innovation and sharing. Where the school norms support innovation we may expect that old-timers might be more adjusted to this norm and thus innovative. Under these circumstances those teachers who are most highly involved and committed in their school, should be most innovative and should participate most in professional sharing. In contrast, those cases where school norms discourage innovation, the teachers who are newest to the system may be more likely to be more innovative. In these circumstances the norm-breakers should be more likely to innovate and share new ideas. It is quite possible that in some schools differentiated norms exist, some of which encourage innovation and sharing among older teachers and discourage it among newcomers. In this context we expect that those teachers who, by virtue of age, experience, values congruent with school norms, or whatever, have the greatest commitment to the teaching profession and who demonstrate this commitment by active participation in professional activities, should evidence the greatest amont of innovation and sharing.

Inasmuch as innovation is an activity that may involve some public attention and risk, we may expect that teachers who feel more powerful and secure with their colleagues and the principal are more likely to innovate than others. Certainly, this association should be greatly heightened with regard to sharing, a patently public process. Carlson (1965) reports that administrators who were well liked by their peers adopted educational innovations more quickly than less well-liked colleagues. Of course, the innovations in Carlson's studies represent systemic programs, such as modern math and foreign language labs, but the principle of postive peer relations should remain the same. In general, the notion that peer relations are important influences upon behavior stems from the interactional approaches of Mead, Cooley, and primary group theorists. Closely related others help, in many ways, to define the situation for the individual. In addition, their reactions help form the individual's own self-perception as professional. In these ways peer attitudes and relations cannot help but affect individual behavior. It may be expected that work in a situation where one feels he is liked and respected by peers and supervisors is more satisfying and fulfilling.

Charters points out that "one of the most significant of the teacher's relationships--the informal colleague relationship--has been virtually ignored in educational research" (1963, p. 781). Most of our discussion of these peer factors, then, is drawn from other areas of inquiry, largely from studies of classrooms and industrial organizations. Lippitt, Polansky, Redl and Rosen (1952), Van Egmond(1960) and Schmuck (1962) have demonstrated ways in which classroom peer relations appear to affect students' feelings about themselves, the risks they will take, their social behavior and even academic performance. Similar expectations can be extrapolated from a number of studies in small group dynamics and industrial settings (Cartwright and Zander, 1960; Katz and Kahn, 1966). A high degree of satisfactory peer activity seems to be an important principle in effective industrial and governmental organization. Stimulated by small group studies (Schachter, Ellertson, McBride and Gregory, 1951; Leavitt, 1951; Festinger, 1950), several authors report the importance of peer group cohesion, loyalty and open communication channels in decreasing alienation and improving worker satisfaction and effectiveness (Likert, 1958; Seashore, 1954). When the peer relations in a school encourage open and free conversation and professional discussion involving most of the members of the staff, we should find greater evidence of, and attention to teacher innovations and professional sharing.

Schmuck (1962) has developed a means of scoring and analyzing sociometric nominations in the classroom to characterize the peer sociometric structure as either diffuse or central. When the choices are spread out and include most staff members equally, the structure is said to be diffuse. When there are a few highly chosen staff members and some isolated or rejected ones, this structure is said to be centralist. In an open or diffuse structure, one where there is a good deal of shared communication or influence linkages, we should find teachers in greatest touch with one another and encouraged to discuss and share their classroom practices.

In addition to the nature of peer relations, however, we must consider the historical importance of the autonomy and independence of the teacher as a professional. Bidwell reports that one of the effects of this role definition is that the "teaching and administrative personnel of a school also enjoy broad discretionary power concerning procedures to be used" (1965, p. 976). One of the most jealously guarded prerogatives and self-identificatory labels of teachers is their status as professionals and right to such autonomy. Recently this symbolism has been challenged by some teacher unions' claims that it represents a defense against the reality of their low pay, low status and low power roles. But most teachers are, and want to consider themselves, professionals with autonomy and independence. Therefore, we would expect that in those situations where a teacher does consider himself free to behave in the classroom as he wishes, he will feel free to try new ideas and practices. Where he feels constrained to conform or behave in a standardized way, when he does not feel he has the power to do as he wishes in his own classroom, this teacher will not operate as a full professional. He will tend to feel alienated from such a constraining system and be less likely to innovate and to share new ideas. Pelz's studies demonstrate the importance of freedom and autonomy for scientists (1957); but they also demonstrate that this freedom from peer and authority constraints is not absolute. It is also necessary for the scientist or teacher to be integrated into the social system, to be involved in some form of social interaction and to receive some support from peer as well as authority figures. The most effective professional norms, then, would not only provide teachers with the freedom to experiment with new roles and styles, but would provide support and encouragement for such activity.

There are two contrasting potentials evident in this discussion of the staff social structure. One is the openness, autonomy and anonymity generated by independent professionals in their private classrooms. The other is the constraint, demands for conformity to tradition and bureaucratic centralization of power in schools. Both themes affect teachers' feelings about the social system and the school, and these feelings become evident in one or another form of role behaviors. One conceptual system for considering the diversity of such feelings intervening between person and system -- between teacher and the social system of the school -- is alienation.

Teacher Alienation and The School

A central question in this research is the nature of the relationship between the bureaucratic elements of the school social structure and teachers' feelings of alienation from that school. What happens when teachers are expected to fit into the school system rather than change it? In what ways, if any, are impersonal or formal peer relationships related to alienation? What happens when there are great demands on teachers by peers, principals, the community, and others to conform and refrain from dealing with controversial issues? What happens when teachers cannot influence what goes on at school? These questions all are concerned with special instances of the proposition that overcontrol, overintegration or great emphasis on molding persons into some bureaucratized system is likely to be related to alienation from that system.

Is a state of normlessness related to feelings of alienation? What happens when teachers feel that some of the school regulations have to be disregarded if they desire to accomplish their goals? What happens when they are not sure where they stand or on whom to count? How do teachers feel when they realize that they occupy conflicting roles and must meet conflicting personal peer and parent expectations? What happens when professional expectations are unreal or inconsistent and goals are unclear? Such questions are concerned with special instances of the proposition that undercontrol, a state of normlessness or lack of contact and communication with others is likely to be related to alienation from the school system.

These two propositions may be thought of as representing opposite poles of the same continuum, or as two sides of a dilemma that has rarely been systematically investigated. This dilemma is in one sense an aspect of a larger issue to which a number of investigators have addressed themselves; namely, the relationship between the individual and the social organizations of which he is a member.

Overcontrol may be defined as a state of socialization in a society, a group, or an organizational system characterized by great demand for conformity and discouragement of dissent. Such a state of socialization is viewed as a potential source of alienation, because the emphasis is put on molding the individual into the system. One consequence of overcontrol may be the loss of individuality, creativity and the potential for innovation. Still another consequence may be the development of superficial compliance to rules and standards rather than internalization and identification of principles as one's own. Several existential philosophers and contemporary social scientists and intellectuals in general describe the quest of man as one of divesting himself of such false masks and roles; they assert that conformity contributes to man's losing contact with himself and behaving without authenticity. In some cases overcontrol might be accepted by the

the individuals concerned because of certain deeply held objectives or ideological principles. But even in such situations protest, rebellion or serious strains or disaffections are to be expected. For instance, Weingarten (1962) points out that the problem in Israeli Kibbutzim is not how to achieve solidarity but how to preserve individual freedom and creativity in a highly cohesive group. He shows that solidarity is achieved but not without strain resulting from the great demands for conformity and the restrictions placed on individual expression. Similarly, Whyte (1956) and Mills (1953) also make it clear that the individual pays heavy prices for organizational solidarity. Teachers, too, often complain about the tedium and red tape connected with their roles and with systemic constraints on their freedom of action. Non-compliance with rules, sabotage, or the fostering of student discontent may be means of expressing such feelings.

Some scientists treat alienation as a general phenomenon pervading all aspects of one's behavior and all relations with primary or secondary associations. Others use alientation as a description of the relations between a person and a specific group or organization. The first level is one of personality traits, where persons feel more or less integrated into their own selves and the entire environment in which they are located. The second analysis level is more concerned with mutual descriptions of organizations and persons, with statements of perceived role perogatives and expectations. In this study we utilize both levels of the concept of alienation; however, we have tried to make clear separations between these two prominent usages at the personality and social system levels.

In addition to this problem of ascertaining the level of the phenomenon of alienation, the term itself historically describes many diverse feelings.

Seeman (1959) addressed himself in a major way to the task of differentiating among various meanings or feelings connected with alienation including: powerlessness, isolation, meaningless, normlessness and self-estrangement. First, Seeman defines powerlessness as "the expectancy or probability held by the individual that his own behavior cannot determine the occurrence of the outcomes, or reinforcements he seeks." (1959, p. 784). Marx conceived of powerlessness as a condition of labor and life in society. He argued that work in capitalist societies was not the creation of man, but external to the worker and in fact controlling his destiny. Consequently, the worker

> . . . does not fulfill himself in his work but denies himself, has a feeling of misery, not of well-being. . . . in work he does not belong to himself but another person. . . . The more the worker expends himself in work, the more powerful becomes the world of objects which he creates in face of himself, and the poorer he himself becomes in his inner life, the less he belongs to himself (Bottomore, 1956, pp. 169-171).

Weber restated the Marxian thesis that powerlessness is generalized to all social relations in western societies (Gerth and Mills, 1958). He argued that in addition to the manual laborer, the scientist is separated from his means of inquiry and research which often are controlled by large research organizations. Similarly, the modern soldier can be viewed as separated from, and lacking control over his means of violence. Mills (1959) viewed powerlessness as a dominant condition in man's role relations in bureaucratic organizations and societies; he observed that the individual is increasingly confronted with remote centers of power in organizations and feels helpless before managerial cadres. More recently, R. Blauner (1964) studied conditions of powerlessness, among other variants of alienation, in a number of industries. He differentiated four modes of industrial powerlessness. These modes are "(1) the separation from ownership of the means of production and the finished products, (2)the inability to influence general managerial policies, (3) the lack of control over the conditions of employment, and (4) the lack of control over the immediate work process." (1964, p. 16). We will be concerned here with the extent to which this alienated perspective exists among teachers, and the effect of such posture upon professional role behavior. The traditional lack of teacher participation in school policy decisions suggests this may be a fruitful variable to explore.

The second way of defining alienation is as personal feelings of isolation from others or from organizations. Alienation in this sense involves loneliness, nonbelonging, noninvolvement and nonidentification in the social system. To Blauner isolation "means that the worker feels no sense of belonging in the work situation and is unable to identify or uninterested in identifying with the organization and its goals." (1964, p. 24). Members of an organization may be unable to relate or feel close to each other. In a school, patterns of staff communication and involvement in peer intercourse should illustrate the degree of such isolation. Given the lack of functional integration of tasks characteristic of the school, this particular form of alienation may be quite pervasive in the educational bureaucracy.

The third way Seeman defines alienation is as meaninglessness; "a low expectancy that satisfactory predictions about future outcomes of behavior can be made" (1959, p. 786). The clearest contemporary examples of this phenomenon are found in Adorno's (1950) treatment of the roots of prejudice, and in Cantril's (1958) diagnosis of the personal and social background of the communist movement. Others such as MacIver (1950), for instance, have been concerned with what they see as conditions of "great emptiness" and "purposelessness" in contemporary western societies. Blauner (1964) suggests that modern bureaucratic structures encourage such feelings of meaninglessness because the employee tends to lack a sense of purpose and direct reward in his work. Meaninglessness is seen as a lack of understanding on the part of organizational members of the relationship of their contribution to the enterprise as a whole or to a broad life program. To the extent that teachers are clear about their goals for youngsters and their ability to contribute to that goal effort, their professional life may be seen as meaningful. To the extent that they feel they can have little affect on youngsters, or that the school system does not appreciate their effort, they will become increasingly alienated.

The fourth way of defining alienation is normlessness, a "high expectancy that socially unapproved behaviors are required to achieve given goals" (1959, p. 787). Merton (1957) attempted to develop Durkheim's conceptualization of anomie by viewing it as a dissociation between culturally prescribed goals and socially structured means or avenues for realizing these goals. We have suggested the concern and potential relation between school norms, teachers' perceptions of system norms, and teacher role behavior. In this study, staff commonability about the existence of professional and social norms also will be related to professional behavior.

The fifth way of defining alienation is self-estrangement, defined by Seeman as a high degree of dependence of the given behavior upon anticipated future rewards, upon rewards that lie outside the activity itself. One extended treatment of this conceptualization is found in Fromm's *The Sane Society* (1955), where alienation is viewed as a mode of experience in which one perceives himself as an alien to, and unable to be, himself. Blauner points out that "the worker may become alienated from his inner self in the activity of work" (1964, p. 26) because he cannot find intrinsic gratification in his work. In other words, work is primarily instrumental and by no means expressive or fulfilling. The worker cannot experience personal growth, because his work is not creatively fulfilling in itself. Self-estrangement must exist where there is awareness of a great discrepancy between ideal and actual images of self, work and work place.

A final measure of occupational and role alienation included in this study is the teacher's own sense of dissatisfaction with his job and role. Many persons continue to teach despite such generic role or specific situational dissatisfaction; many are forced to by economic pressures and limited mobility. We expect that those teachers less satisfied with their current positions will be less likely to invest a great deal of energy in innovative activities in the classroom or in sharing new ideas about teaching with their colleagues.

In this study teachers feelings along some of these dimensions of alienation will be related to the social and normative structures of the local school. An attempt will be made to study the relationship between characteristics of the school, social structure and teachers' personal experience of alienation. The way teachers perceive the school's organizational climate is closely connected with whether or not they experience feelings of powerlessness, isolation, noninvolvement, and dissatisfaction.

Although the person's relation to the social structure can be considered a source of feeling of alienation, such feelings in turn can influence the way the social structure is perceived. In other words, the relationship between perceived social structure and feelings of alienation may be rather circular.

It should be pointed out that members of an organization can accept conditions of undercontrol or overcontrol for different reasons. A true Buddhist or Muslim might accept his powerlessness easily and view such an acceptance as a virtue. Others might view a great demand for conformity as a necessary condition for the maintenance of their own status and the system. Such persons need not be considered as alienated unless there is a perceived discrepancy between what is actual and what is possibly desirable or ideal. The greater the discrepancy between what is actual and what is ideal, the greater the alienation. Those who are powerless in an organization but would like to have some power are expected to be more alienated than those who accept their powerlessness. Teachers who take the impersonality and confusion of meanings in much of the educational system for granted are expected to be less alienated than those who do not anticipate or who cannot accept such conditions. Thus, our stress will be both on characteristics of organizational and personal systems, as well as on the discrepancies between actual and ideal perceptions.

Dissatisfaction with and rejection of the dominant value systems and relations in an organization may be portrayed in certain types of behavior which may, for analytical purposes, be viewed on a retreatism-involvement dimension. In these terms an alienated person may either retreat from, comply with, or act upon the social system. On one end of the continuum we find those alienated people who choose to engage in activities and practices aimed at changing the system. Such engagement may be reflected in active involvement, opposition, resistance, invention, change or creativity. In between, we find those who comply publicly rather than privately, because they cannot internalize or identify with a value system that clearly confronts the organization or group.

Our assumption is that the innovation and sharing of teaching practices requires a degree of energy and commitment to the one's professional role that is encouraged by a sense of involvement and integration in the school. Teachers who are highly alienated from the school, therefore, should be less likely to be positive about their professional roles, less respected and accepted by peers and less involved in communication with colleagues. Similarly, we expect highly alienated teachers to be less likely to innovate teaching practices in their classroom and to share them with colleagues.

At the same time, it is possible to conceptualize innovation and sharing as efforts at classroom and school change, thus representing one form of the resolution of organizational and role alienation. The source of dissatisfaction that generates teaching innovations may be in the social system of the school or the classroom. More than likely, the primary source is within the teacher's own classroom since some sense of classroom problem or pain must exist before innovation seems justified:

> "A problem exists when there is a discrepancy between the actual and desired state of affairs. In order to identify problems in his classroom, a teacher must have a clean notion of his goals for the students and be sensitive to the processes of the classroom.
>
> In some cases the state of affairs in the classroom is obviously unsatisfactory or intolerable...In others it may be a tolerable situation that could be improved...another type of problem that is perennial: how to help students reach their fullest potential for learning or growth." (Schmuck, Chesler and Lippitt, 1966, p. 15.)

Just as the primary source of disaffection that generates innovation is likely to be classroom conditions, the primary source of disaffection that generates sharing of innovations with others is more likely to be some aspect of staff conditions in the school. Several of the structural and interpersonal modes of alienation discussed in this chapter would seem to be alleviated or even resolved by the active presentation of self, communication with others about important and valued matters, and perhaps persuasion, that may be involved in the sharing of teaching innovations.

The Principal

Clearly a key role and role occupant in the network of staff social relations in schools is the principal. As with most supervisors he has a variety of alternative role opportunities. He can be mainly concerned with his teachers' goal performance, with their good feelings, or with some combination of these tasks. This traditional dichotomization of leadership roles and functions (Benne and Sheats, 1948) has been investigated in the school setting by several scientists. Halpin (1956) discusses the distinction between task-initiating and personal-consideration roles of the principal, while Getzels and Guba (Getzels and Guba, 1957; Guba and Bidwell, 1957) use the terms nomothetic and idiographic to describe essentially the same functions. Getzels also suggests another style, that of the "transactional" leader, which achieves a balance between these divergent polarities. The principal who is seen by his staff as being transactionally inclined seems to generate the greatest staff confidence and effectiveness.

But in this professional bureaucracy there are additional dimensions of the supervisor's role that must be considered. The principal can be concerned with his teachers' professional activity and growth or not; and he can be concerned about a tight organizational administration or not. He can choose to meet with parents and community leaders a great deal or not at all. He can choose to be , or try to be, warm and friendly, or cold and impersonal. In terms of his working relations with teachers, it seems that the principal's degree of formal and structured or relaxed and informal behavior may be an essential element in the degree of teacher acceptance of his role performance. Bidwell (1965), for instance, records teachers' desires to define the principal as an informal colleague rather than a formal and distant administrative manager.

Finally, the principal can choose to share decision-making power with his staff or keep it to himself. Tannenbaum (1954) and others (French, Israel and Aas, 1960) report that workers feel more satisfied when they feel that they can have some influence on management officials. Similarly, teachers who feel they participate in policy-making roles, and have a say in what goes on in the school, seem to be more satisfied with their work (Chase, 1952). To the extent that teachers feel involved in important professional decisions, they will be more interested and involved in other professionally relevant activities, such as teaching innovations. However, as Tannenbaum (1954) warns, some individuals will be less satisfied by involvement and participation in decision making. We may expect that the general rule of involvement leading to greater satisfaction will hold in most cases, with the reverse being true for teachers with certain personality characteristics and schools with certain principals and certain normative themes. In the same context, Likert's review (1961) can be extrapolated to suggest that teachers will also be more involved when they perceive that their principal has influence with other principals and with the superintendent's decision-making activities. We would expect teachers to feel effective in influencing their supervisor when they perceive their supervisor, too, as being influential.

The Gross and Herriot (1965) studies suggest that an effective principal is likely to be committed to the professional growth and development of his staff. This private orientation is only one factor, however, and it must be coupled with public postures validating these concerns to influence teachers to more complete professional considerations. Extrapolations from industrial management studies also suggest that the principal may operate as a role model for his teachers (Kahn, 1956). If the principal demonstrates an interest in professional growth and innovation teaching, his enthusiasm could well contage to his staff. The perception of principal interest and potential support helps establish firm and visible organizational norms for teachers to follow (Becker, 1953).

We have already suggested that the principal's style of supervision cannot be effective if it is felt to encroach on the professional autonomy and freedom of his teachers (Becker, 1953; Gouldner, 1954; Kahn and Katz, 1960; and Pelz, 1957). In particular, close supervision of supposedly autonomous professionals may be very dysfunctional and trigger substantial staff hostility and resentment. Gross and Herriot (1965) highlight this issue as they point out that some administrator efforts to help teachers "might be construed as betraying a lack of confidence in them and as out of bounds. Or, if administrators urge their subordinates to try a new practice, it may be viewed as an encroachment on their rights as professionals." (p.99). In over 55% of the schools Gross and Herriot studied, the teachers wanted the principals to exert less control over their professional activities; in the remaining 45% the teachers wanted more exercise of principal controls. So an effective role vis-a-vis professional subordinates must combine the exercise of control with the provision of autonomy. At the same time, the principal can also perform to guarantee his staff's autonomy by mediating external parental and community pressures (Becker, 1953). He can best do this, of course, when he actually does have upwards influence (Likert, 1961).

It is also apparent that an effective educational manager must be in touch with the standards and relationships of his staff members. By the same token, teachers must feel he has the necessary information, and that there is two-way access from principal to teacher and the reverse. This pattern of shared communication can be expected to minimize staff alienation (Kornhauser, 1959) and increase the potential for collaboration. Another important outcome of this aspect of the principal's role is his knowledge about what's going on in his staff. To the extent the principal is accurate about the character and organization of peer relations, we can expect he would know what to do if he wanted to exert influence (Chesler, Schmuck and Lippitt, 1963; Chowdhry and Newcomb, 1952).

Among the various members of the school staff there may be some highly divergent and even competing preferences and expectations regarding the principal's behavior and function. For instance:

> "The principal of the school may, for example, be expected by some teachers to visit them regularly to give constructive help, and by others to trust them as professional personnel not in need of such supervision." (Getzels, 1963, p. 314).

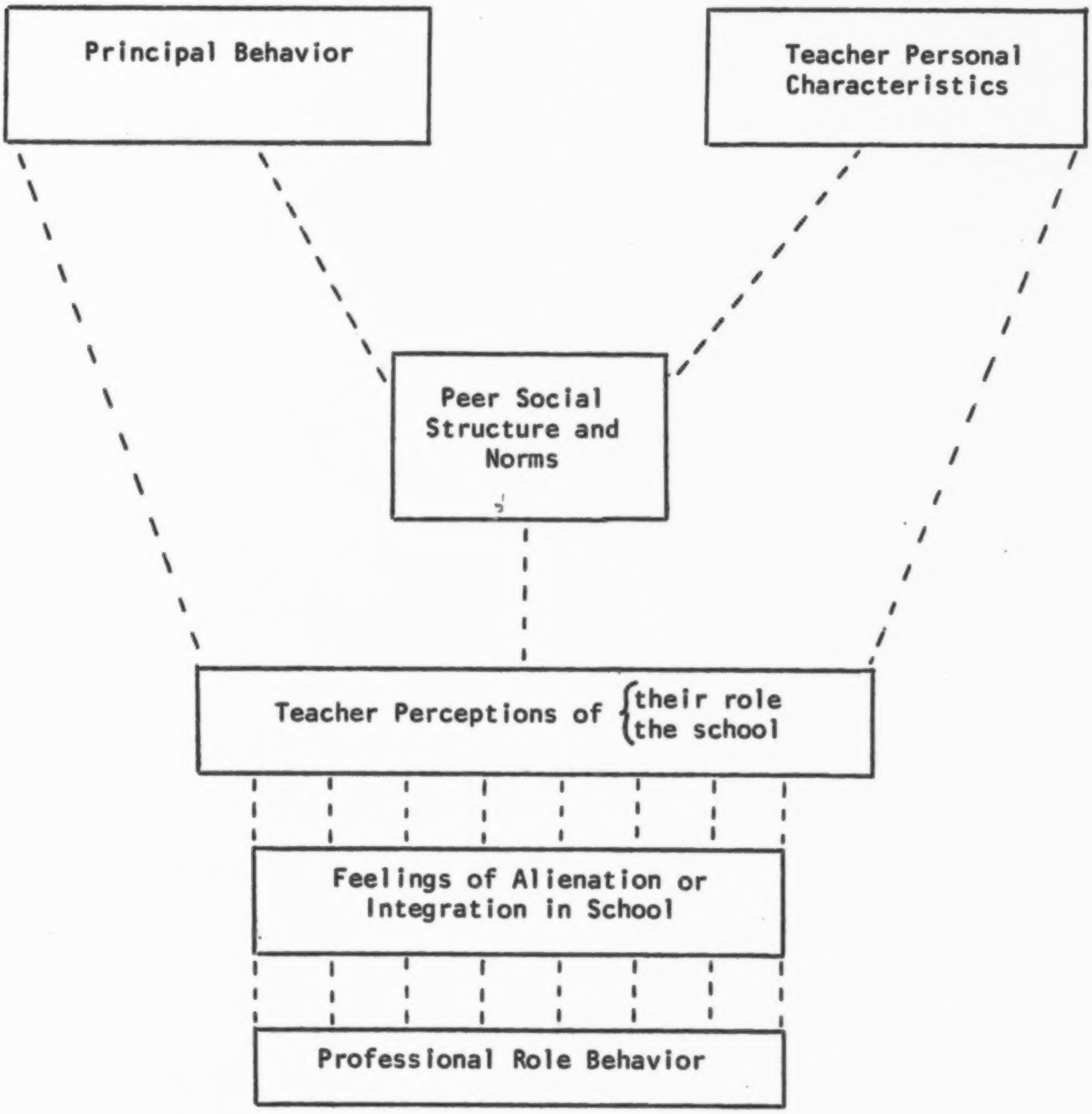
In all of these respects, therefore, it is not enough to know what the principal reports about himself. It is perhaps even more critical to know how the teachers perceive and interpret his behavior. For here, as elsewhere, teachers' phenomenological views of the social system are the most important determinants of behavior. Some authors utilize staff perceptions as a check on the manager's statement of his own behavior; other authors utilize this variance as an important variable itself. It is quite possible, of course, that various informants might not agree on the behaviors of an official (Charters, 1963). Since we are to deal in part with teacher phenomenology, we must recognize that it is not the sole determinant of behavior by any means. A teacher who is an isolate in the sociometric structure will not be able to publicize an innovation no matter how competent and respected he feels. Our work will permit some comparison between some more objective and other more phenomenological views of the reality of relationships in the school system.

Summary of School Conditions and Innovation and Sharing

The conflux of various forces in the internal social structure of the staff are diagrammatically represented in Figure 1. For instance, the diagram suggests that individual professional behavior, whether innovative or not, is mediated by the teacher's perceptions of the staff social system and his reactions to those perceptions. It is important to recognize that the objective characteristics of the peer social structure are mediated by individual teacher perceptions. Moreover, these perceptions are then evaluated affectively and become attitudinal predispositions before eventual translation into role behavior. Teacher perceptions of their own role and their school are a partial function of the peer social structure and norms, teacher personal characteristics and principal behavior. In turn, the peer social structure is affected both by individual teacher characteristics and principal behavior. From the principal's point of view, he may be able to affect change in teachers' perceptions and behaviors in two ways: (1) directly, through conversation and interaction with teachers or, (2) indirectly, through his influence upon the establishment and operation of certain staff norms and structures. Individual teacher characteristics, too, may be directly related to individual perceptions and role behaviors. More than likely, they may be mediated by the standards and structures of the peer social system. This diagram stresses the importance of the peer social system as a mediator of interaction for teachers and principals, and a point of entry for individual and organizational change designs.

Figure 1

REPRESENTATION OF INTERNAL SOCIAL STRUCTURE AND ROLE BEHAVIOR


Principal Behavior
Teacher Personal Characteristics
Peer Social Structure and Norms
Teacher Perceptions of {their role / the school
Feelings of Alienation or Integration in School
Professional Role Behavior

Sample and Methods of this Study

This study was conducted among three school systems in southeastern Michigan. One school system is rural in character, and the other two are semi-industrial suburban communities. By and large the school populations are lower middle class and middle class, with only one school system having a sizable proportion of lower class or Negro students. None of these systems currently feel under great pressure from community or professional agencies to change. By and large these are small school systems, with from four to nine schools in each system.

The data to be reported in this study were collected by means of a self-report questionnaire administered to the entire professional staffs of the three school systems. There are a total of twenty-one schools and 499 teachers in the three school systems. The number of teachers in each school ranges from 7 to 88. Of the total population, 473 teachers (95%) responded to the questionnaire. Figure 2 represents the number and percent of teachers in each school who responded to the questionnaires.

(Figure 2)

The dependent variables of personal and organizational innovation and sharing are measured in several different ways. The basic measure of innovation is the teacher's self-report response to the question:

> We are interested in significant classroom practices for improving pupil learning or motivation to learn. Are you trying any procedures or techniques to accomplish this in your classroom?
>
> Yes_____ No_____

Out of the total of 473 teachers responding to the questionnaire, 375 answered this question (79%). Of the total who answered, 63% reported they were innovating and 37% reported they were not.

Figure 2

DISTRIBUTION OF TEACHER RESPONSES BY SCHOOL

School	Teacher N	Teachers responding	%
1	28	21	75
2	20	18	90
3	16	16	100
4	15	15	100
5	36	34	94
6	43	37	86
7	13	13	100
8	7	6	86
9	12	12	100
10	19	19	100
11	13	13	100
12	11	11	100
13	88	84	95
14	43	43	100
15	22	22	100
16	12	12	100
17	20	20	100
18	23	20	96
19	23	20	87
20	21	21	100
21	14	14	100
Total	499	473	95

The measure of sharing used throughout this study is derived from three separate items. Two of these involve the number of peer nominations for innovation a teacher receives from others and the number of peer nominations he makes of others on the following item:

> We are interested in significant classroom practices for improving pupil learning or motivation to learn. On this roster of staff members of this school, please indicate any significant classroom practices you know teachers are using or have used. Please write a brief description of the practice next to each teacher's name if you can.

A third component of the index of sharing is the teacher's reported knowledge of what others are doing:

> To what extent do you know what significant practices other teachers are using to improve pupil learning in their classroom? Know a lot____. My knowledge is limited____. Have some knowledge____. Don't know what others are doing____.

When combined, these three items provide the highest sharing score for those teachers who know what their colleagues are doing and whose colleagues know what they are doing. Only one-way information typically results in a low sharing score. Information is available on 79%, or 375, of the total 473 teachers for this index; 45% are categorized as low sharers and 55% as high sharers.

There appears to be slightly more innovation by elementary school teachers than by secondary school teachers (65% vs. 60%), and slightly more high sharing among secondary school teachers than among elementary school teachers (59% vs. 50%), but neither of these differences approach acceptable levels of statistical significance. At both levels of instruction those teachers who report that they innovate also are more often high on the sharing index.

Table 1 presents the significantly positive relationship between teachers who innovate and share at teachers practices.

TABLE 1

INNOVATION RELATED TO SHARING BY TEACHER'S LEVEL OF INSTRUCTION

Sharing	Innovation No	 Yes	Total
Elementary level	(N=51)	(N=113)	(N=164)
Low	73%	38%	(N= 80)
High	27%	62%	(N= 84)
$X^2 = 16.68; p < .01$			
Secondary level	(N=67)	(N=113)	(N=180)
Low	66%	24%	(N= 71)
High	34%	76%	(N=109)
$X^2 = 30.84; p < .01$			

It is very clear that these two different variables measured in different ways are highly related. Teachers who do not report innovating are not likely to be seen as high sharers of innovative practices -- not by themselves and not by their colleagues. The differences between levels of instruction are insignificant.

In addition to these basic measures, two more refined measures of innovation are included in our analysis. In one refinement, teachers were asked to indicate the degree of originality and the source of their classroom practice. Innovators may have invented the new practices themselves, in which case they are inventions. Or, they may have taken the idea from somewhere with or without modifications, that is, they is, they are adaptions or adoptions. The following question was asked of everyone reporting an innovation:

The classroom practice you just described can be "original with you" (i.e., you invented it) to "got it from somewhere else." Please check on the line below the position that best describes your practice.

original with me (to the best of my knowledge)	got it somewhere else and made major changes	got it somewhere else and made minor changes	got it somewhere else without making any changes

When a practice is "original with me" it is considered an invention; when it came from somewhere else and the teacher made changes, it is an adaption; when it came from "somewhere else without making any changes" it is an adoption. Table 2 indicates the frequency of each type of innovation in elementary and secondary schools.

(Table 2 here)

TABLE 2

SOURCE OF INNOVATION BY LEVEL OF INSTRUCTION

Level of Instruction	Innovation Source Adoption	Adaptation	Invention	Total
	(N=68)	(N=64)	(N=72)	(N=204)
Elementary	38%	31%	30%	(N=107)
Secondary	27%	32%	41%	(N=97)

$X^2 = 4.24$; NS

There are slightly more invention-innovations at the secondary school level and slightly more adoption-innovations at the elementary school level, but the differences are insignificant.

The second refinement of the dependent variable of innovation involves the categorization of innovations with regard to the behavioral orientation of the teaching practice. Different kinds of practices may also interest different innovators, and for different reasons: the practices are new to them, they may serve to improve classroom climate for them, they fit their teaching styles, etc. In this study we have chosen to categorize teaching practices according to the extent to which they focus on student behavior and student-student or student-teacher processes in the classroom. Each teacher reporting an innovation was asked to describe it in some detail as follows:

> Please describe the most significant one of these practices. What specifically did you do?
>
> What kind of problem regarding pupil learning were you trying to solve?
>
> Does it require any special training, preparation or equipment?
>
> Were there any special difficulties or operating problems? If so, what?
>
> What were the pupils' reactions? What pupil behaviors changed?

Two judges, master teachers with a great deal of experience with teachers and teaching, then rated each practice. Judgments from a third rater were solicited whenever there were major discrepancies between the ratings of the first two experts. The behavioral orientation of innovative practices is based on the following ratings:

1. Classroom Process

formal:___:___:___:___:___:___:___:___:informal
feelings controlled:___:___:___:___:___:___:___:___:feelings expressed
teacher-planned:___:___:___:___:___:___:___:___:pupil-planned
lecture:___:___:___:___:___:___:___:___:discussion
competitive:___:___:___:___:___:___:___:___:cooperative
business-like:___:___:___:___:___:___:___:___:friendly
content:___:___:___:___:___:___:___:___:interaction

2. Material or Behavior Emphasis

Emphasizes materials or equipment — Emphasizes teacher or pupil behaviors
1 2 3

For each item on classroom process a check in the first two spaces from the right means a high rating for the practice along that particular dimension of classroom process. These ratings are summed and a practice is labeled as high in total classroom process if it is high in more than five of these seven categories. It is low if it is rated high on less than three categories. This rating is then combined with the rating of the practice on its material or behavior emphasis to give the final rating of the behavioral-orientation of the practice. Table 3 indicates the frequency of each type of innovation in elementary and secondary schools.

(Table 3 here)

It is obvious there are no differences between elementary and secondary schools on this character of their innovation.

TABLE 3

BEHAVIORAL ORIENTATION OF INNOVATION BY LEVEL OF INSTRUCTION

Level of Instruction	Behavioral Orientation Low	Medium	High	Total
	(N=86)	(N=31)	(N=37)	(N=154)
Elementary	55%	20%	25%	(N= 84)
Secondary	57%	20%	23%	(N= 70)

$X^2 = .11$; NS

Thus we are not tapping an elementary school concern for "students" and a secondary concern for "subject", but some more pervasive aspect of teaching style. These two refinements of the basic innovation measure will be introduced in the text of this report wherever they shed additional light on the character of a variable or a relationship under examination. In the fifth and sixth chapters of this report we will be making use of other indices -- of school level statistics regarding innovation and sharing. A fuller explanation of the averages, distributions and percentage means used in these analyses at that time. Then we will be able to go beyond distinguishing between individual styles or attributes of peer relations and compare characteristics of organizations. Since this study has twenty-one schools as its sample it has the potential of being more than a single or even a series of case studies, but could be a comparative study. Our intention, however, is not to conclude with phenotypic or "best model" for an "innovator" or an "innovative staff." It is our expectation that some variables will work one way in one system and another way in another system; such is the nature of the many varied ways of encouraging innovation or change in complex social systems. But it is our objective to discover some broad and genotypic outlines which will suggest underlying and consistent determinants of teachers' professional role behavior in educational organizations.

CHAPTER III

PERSONAL CHARACTERISTICS OF INNOVATORS AND SHARERS

In this chapter we examine the relation between teachers' personal characteristics and their innovation and sharing of classroom teaching practices. Innovation and sharing were conceptualized earlier as the role-performance outcomes of certain teacher role-perceptions. We are interested in identifying those personal characteristics that may be related to teachers' perception of these components of professional roles, and related to their performance of these perceived roles. The personal characteristics examined range from demographic categories to personal attitudes and professional orientations. Some have to do with characteristics of innovators and sharers as teachers, others are more general characteristics of them as persons.

The Independent Variables Investigated

Several different categories of independent variables are examined. Some of these inquire about non-teaching characteristics relevant to a person's general style and outlook. For instance, demographic and background categories are used to distinguish between teachers with more urban and cosmopolitan versus more rural and provincial backgrounds. Furthermore, teachers' level of professional training and familial understanding and support for their occupations are among those variables that may be related to full professional role performance. The specific variables examined include:

Demographic and background characteristics:

1. Sex
2. Age
3. Marital Status
4. Father's occupation
5. Rural-Urban background
6. Religion
7. Education

Several general personality attributes are examined, with the expectation that certain aspects of teachers personal views and orientations would be related to their professional role performance. In general teachers who see themselves and society as relatively well integrated, who feel they are potent and responsible in their own lives, and who have a positive and flexible orientation to change should be most involved in innovating and sharing teaching practices. The general personality or attitudinal qualities of teachers examined include:

Personal Styles

1. Orientation to change
2. Reliance upon authority
3. Anomie
4. General alienation
5. Social motives of power, achievement and affiliation

In addition to these general qualities there are other variables directly related to the teaching profession that should influence the saliency of innovation as a role component. In order for the classroom teacher to perceive innovative teaching as a conscious and deliberate professional role commitment he must: (1) perceive the improvement of classroom learning as an important goal; and (2) perceive that a change, or constant change, in teaching practice is necessary for the achievement of that goal. Some of the relevant personal variables in these roles perceptions and orientations must include the degree of a teacher's commitment to the teaching profession and his professional orientation and values. A teacher's commitment or marginality to the profession influences how seriously he takes his role and how much energy he invests in it. Such commitment influences the degree to which a teacher is likely to strive beyond the existing teaching-learning situation, and the extent of his interest in the improvement of his own and others' teaching. Certainly a teacher marginal to the profession may be just as aware as a more highly involved teacher of the need for improvement in his classroom learning climate. However, he may lack the energy, desire and perhaps skill of a more highly committed teacher to be equally challenged by and responsive to his real teaching problems. Moreover, the more marginal professional may have a smaller repertoire and less access to the solutions to classroom problems. Questions relevant to the relationship between marginality or commitment to the teaching profession and classroom innovation are as follows:

Commitment to teaching profession

Teaching background

1. Teaching background of spouse and parents
2. Own teaching background

    a. Years teaching present grade or subject
    b. Years teaching present school
    c. Years of teaching experience
    d. Whether teaching in own trained specialty

Future status

1. Tenure status
2. Plans in ten years

A teacher's educational values and goals indicate whether and what kind of classroom learning climate will be a major concern to him. Moreover they will determine what kinds of innovation, if any, are relevant to his own classroom process and goals. The need for classroom improvement and change will probably be felt more keenly by those teachers who see a discrepancy between the actual situation in their classes and their preferred or ideal teaching-learning situation. However, there may be different thresholds of tolerance for discrepancy, and discrepancy that is too great may produce a sense of futility or resignation. The amount of perceived discrepancy that is related to constructive concerns will be estimated from the evidence regarding actual and preferred conditions. Questions relevant to these variables include:

Professional orientation

1. Priorities of educational objectives for the school system
2. School priorities
    a. Actual priorities
    b. Preferred priorities
    c. Discrepancy between "actual" and "preferred" priorities
3. Classroom atmosphere on a variety of dimensions
    a. Actual climate
    b. Preferred climate
    c. Discrepancy between "actual" and "preferred" climates
4. Time spent on daily activities

Demographic Characteristics and Innovation and Sharing

We have noted that the total number of teachers in the sample was 473; Table 4 shows the distribution of these teachers on the various background variables.

(Table 4 here)

It is clear from this table that there are major differences in the demography of elementary and secondary school teachers. The latter are more often males, seem to be younger and more highly educated. The majority of male teachers fall in the middle age group (25-40), whereas the majority of female teachers are either older or younger. The younger female teachers are predominantly located in the secondary schools, with older female teachers more often found in elementary schools.

TABLE 4

DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLE BY LEVEL OF INSTRUCTION

Demographic Characteristics	Elementary (N=236)	Secondary (N=237)
A) Sex		
Male	27%	39%
Female	50%	47%
No Answer	22%	14%
B) Age		
25 or less	23%	24%
26 - 39	19%	27%
40 or more	34%	19%
No Answer	24%	30%
C) Marital Status		
Single	13%	14%
Married	68%	64%
Widowed or divorced	06%	07%
No Answer	13%	15%
D) Education		
Bachelor's degree	70%	55%
Master's degree	16%	30%
No Answer	14%	15%
E) Rural-urban background		
Rural	21%	14%
Urban	65%	71%
No Answer	14%	15%
F) Religion		
Protestant	61%	53%
Other	27%	34%
No Answer	12%	14%
G) Father's Occupation		
Laborer & blue collar	20%	29%
White collar	25%	14%
Managerial Professional	37%	37%
No Answer	17%	21%

Throughout this chapter we will examine these differences in instructional level as they affect relations among the independent and dependent variables.

The data indicate that marital status, sex, age and number of children do not differentiate teachers with regard to the professional role outcomes of innovation and sharing of teaching practices. Although the number of children a teacher has does not appear to be related to professional role performance, among innovators, those teachers with young children tend more often to be adopters than adapters or inventors. These data are presented in Tables 5 & 6. It may well be that teachers who have a family with young children feel more home pressure, and may thereby have less time and energy for making classroom inventions or modifying others' inventions.

(Tables 5 and 6 here)

The occupational status of teachers' parents is not significantly related to teachers' innovation, although there is a trend for teachers from higher status homes to be more innovative. With regard to sharing, however, a curvilinear relationship exists; teachers whose fathers were in the lower white collar group tend to share significantly less than teachers whose fathers were either in a lower or higher status occupation. Teachers from low status backgrounds, who have been upwardly mobile, may need especially to protect their professional status from competition or threat from others. One way to guard against such vulnerability may be to keep all professional activities private, and not to allow others to see or know what is going on in the classroom.

Rural-urban background is significantly related to both innovation and sharing. Teachers who spent most of their early years in rural areas

TABLE 5

NUMBER OF CHILDREN IN RELATION TO INNOVATION

Children	Innovation No	 Yes	Total
	(N=115)	(N=195)	(N=310)
None	37%	63%	(N=107)
One	36%	64%	(N=126)
Two or more	39%	61%	(N= 77)

$X^2 = .19$; NS

TABLE 6

NUMBER OF CHILDREN AGED 0-4 IN RELATION TO SOURCE OF INNOVATION

Children aged 0-4	Innovation Source Adoption	 Adaptation	 Invention	Total
	(N=54)	(N=55)	(N=66)	(N=175)
None	26%	34%	40%	(N=137)
1 or more	47%	21%	32%	(N= 38)

$X^2 = 6.436$; $p < .05$

tend to innovate and share less than teachers with town and city backgrounds. These data are presented in Tables 7A and 7B.

(Tables 7A and 7B here)

The negative relation between rural background and innovation may be explained partially by the style of life and orientation developed by teachers from rural families. Their own experience in school may be quite limited by the homogeneity of rural classes and a heavy dependence on routine and habitual ways of teaching and learning.

When the sex variable is controlled it becomes clear that the positive relation between rural background and innovation applies only to male teachers. Male teachers are either more affected by a rural way of life and professional socialization patterns, or they retain it much more than female teachers. Sex does not discriminate among rural or urban backgrounds with regard to sharing.

Teachers' religious affiliations are not related to either innovation or sharing, but their degree of church attendance, at least at the extremes, is related negatively to sharing. Table 8 shows that 69% of the teachers who attend church more than once a week do a low amount of sharing, whereas only 35% of the teachers who never attend church are so categorized. In all probability this finding, like the influence of young children, reflects the time and energy limitations on teachers highly involved in extra-professional organizations and activities.

(Table 8 here)

TABLE 7A

RURAL-URBAN BACKGROUND RELATED TO INNOVATION

	Innovation		
Rural-Urban	No	Yes	Total
	(N=133)	(N=215)	(N=348)
Rural	49%	51%	(N= 71)
Town & City	35%	65%	(N=277)

$X^2 = 4.66; p < .05$

TABLE 7B

RURAL-URBAN BACKGROUND RELATED TO SHARING

	Sharing		
Rural-Urban	Low	High	Total
	(N=159)	(N=191)	(N=350)
Rural	58%	42%	(N= 70)
Town & City	42%	58%	(N=280)

$X^2 = 6.37; < .05$

TABLE 8

CHURCH ATTENDANCE RELATED TO SHARING

Church Attendance	Sharing Low	 High	Total
	(N=151)	(N=197)	(N=348)
More than once a week	69%	31%	(N= 35)
Once a week	42%	58%	(N=153)
Once a month	49%	51%	(N= 47)
A few times a year or never	35%	65%	(N=113)

$X^2 = 13.23;\ p < .005$

There does not appear to be any systematic relationship between level of educational training and innovation or sharing. However, among teachers who innovate, those with less coursework beyond the B.A. are more behaviorally oriented in their practices than innovators with Master's degrees. These data are presented in Table 9.

(Table 9 here)

This finding may be due to several factors involving the interaction between instructional level and education. Table 10 shows the breakdown of this relationship in elementary and secondary schools.

(Table 10 here)

Almost 60% of the teachers with less additional coursework are elementary school teachers, but the evidence presented in Chapter II demonstrates that elementary school teachers are no more innovative of behaviorally oriented practices than secondary school teachers. At the elementary school level teachers with less advanced training are slightly less behaviorally innovative but this relation is not significant; at the secondary school level teachers with less advanced training are more present at both high and low extremes. Even though some of these relations are statistically significant, the small number of cases in some cells makes any reliance on these tables suspect. The most compelling explanation may be that less trained teachers have not been as exposed to the formal apparatus of post-graduate educational curricula, with its concomitant emphasis on special subject skills and disciplinarily oriented courses.

When we focus on the area of specialization of educational training, it is clear that teachers who were trained primarily in one of the

TABLE 9

EDUCATIONAL TRAINING RELATED TO BEHAVIORAL ORIENTATION OF INNOVATION

Education	Behavioral Orientation Low	 Medium	 High	Total
	(N=86)	(N=31)	(N=37)	(N=154)
Bachelors degree and above	58%	15%	27%	(N=114)
Masters degree and above	50%	35%	15%	(N= 40)
	$X^2 = 7.96; p < .05$			

TABLE 10

EDUCATIONAL TRAINING RELATED TO BEHAVIORAL ORIENTATION OF INNOVATION BY LEVEL OF INSTRUCTION

Education & Level of Instruction	Behavioral Orientation Low	 Medium	 High	Total
A. Elementary	(N=46)	(N=17)	(N=21)	(N=84)
Bachelors degree and above	57%	18%	25%	(N=67)
Masters degree and above	47%	29%	24%	(N=17)
	$X^2 = 1.4$; NS			
B. Secondary	(N=40)	(N=14)	(N=16)	(N=70)
Bachelors degree and above	60%	11%	30%	(N=47)
Masters degree and above	52%	39%	9%	(N=23)
	$X^2 = 9.5; p < .01$			

academic subjects--English, mathematics, natural sciences, or social sciences--tend to share more than teachers who majored in education or in non-academic subjects. These data are presented in Table 11; there is no relationship between such training specialties and innovation.

(Table 11 here)

Once again we are confronted with a phenomenon that is partly explicable in terms of the differences between the needs of elementary and secondary schools and teachers. Ninety-two percent of the teachers trained primarily in education are teaching in elementary school; 12% of those with academic subject majors and 38% of those trained in non-academic subjects are in elementary schools. Being a secondary school teacher, which in 88% of the cases means being trained in an academic subject, accounts for much of the high sharing groups in Table 11. Persons primarily trained outside of the educational establishment may have much more to talk about, may feel the need to talk more about what they're doing, and may feel more free to share ideas than teachers trained within the pre-professional schools. That this may be a level of instruction phenomenon is further substantiated by the finding that within elementary and secondary schools there are no significant differences in innovation or character of innovation associated with differential training.

In summary, it is apparent that a number of these demographic and background characteristics of teachers are not significantly related to the innovation and sharing of teaching practices. Sex, age and marital as well as parental status are examples of these non-related categories. Some variables that have important implications for the availability of teachers time and energy were related to certain aspects of the character of innovations and to sharing. The frequency of church attendance is related to

TABLE II

EDUCATIONAL SPECIALTY RELATED TO SHARING

Specialty	Sharing Low	 High	Total
	(N=152)	(N=185)	(N=337)
Education	53%	47%	(N=116)
Academic Subjects	32%	68%	(N=119)
Non-academic Subjects (Music, art, etc.)	52%	48%	(N=102)

$X^2 = 13.06$; $p < .01$

sharing and the number of young children a teacher has is negatively related to originality of innovations. Teachers who come from urban and semi-urban backgrounds appear to be more likely to innovate and share than teachers from rural families, and this relationship appears to be accentuated for males. It also appears that teachers exhibiting moderate upwards mobility, i.e., those who have come from moderately lower status families, are less likely to be involved in sharing than teachers who have come from laboring or high status families. One interpretation of the latter finding may be found in the mobile teacher's need to protect and secure his newly secured status from the potential threat of peer review and evaluation. It also appears that level of educational training is not related to innovation or sharing but that teachers with less than an M.A. degree consistently innovate behaviorally oriented practices more often than teachers with more advanced training. Moreover, teachers trained in an academic specialty share more than teachers trained in education. The character of their training which may establish felt strengths or deficiencies as well as different pre-professional socialization may account for this phenomenon. Throughout the consideration of these variables is a theme stressing the differences in background and training characteristics between elementary and secondary school teachers. The latter are more often males, more often younger and have greater amounts of educational training. Chapter II points out, however, that the amount and character of innovation and sharing is not significantly different between these two levels of instruction.

Personal Styles and Innovation and Sharing

Several aspects of teachers' general views of themselves and orientations to the world are explored in this section. One major variable in this respect is teachers' orientations towards change, assessed by asking respondents whether they strongly agree, agree, disagree, or strongly disagree with the following items.

> I don't enjoy having to adapt myself to new and unusual situations.
>
> The ways of the past are hardly ever adequate to handle present day problems.
>
> I have a working plan and schedule which I follow carefully.

When the first and third items are reverse coded (i.e.,so that disagreement with the first and third statements and agreement with the second are coded in the same direction) the mean of all three items provides a scale score representing a positive and flexible orientation towards change in one's own role or situation. Data regarding the relation between this orientation and professional role performance are presented in Tables 12A and 12B.

(Tables 12A and 12B here)

This measure of openness to change does not seem to be related to innovation but is positively and significantly related to sharing of teaching practices. Teachers who are more positive in their views of the necessity or comfort of change situations are more highly involved in sharing. The difference between innovation and sharing in these findings suggest that teachers' report of their attitudes toward change may reflect or influence more of their postures toward public activities with colleagues rather than private events and roles.

A second major variable investigated here was the degree of teacher reliance upon authority as a general outlook on life. The following two items assessing this variable were taken from scales devised by Adorno and his colleagues (1950):

TABLE 12A

POSITIVE ORIENTATION TO CHANGE RELATED TO INNOVATION

Orientation to Change	Innovation No	 Yes	Total
	(N=132)	(N=221)	(N=353)
More positive	36%	64%	(N=216)
Less positive	38%	62%	(N=137)

$X^2 = .25$; NS

TABLE 12B

POSITIVE ORIENTATION TO CHANGE RELATED TO SHARING

Orientation to Change	Sharing Low	 High	Total
	(N=156)	(N=195)	(N=351)
More positive	36%	64%	(N=216)
Less positive	50%	50%	(N=135)

$X^2 = 5.9$; $p < 05$

> In the history of mankind there have probably been just a few really great thinkers.
>
> In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

Both items are worded and coded in the same direction, so some degree of agreement with each reflects a greater tendency to rely upon external authority for wisdom and direction. The data do not indicate any systematic relation between reliance upon authority and innovation and sharing. Teachers' general views of the expertise and power vested in great authority does not appear to be related to these aspects of their own professional performance.

Two other personality variables considered are teachers' general feelings of alienation from society and their sense of anomie. Both these measures reflect on orientation to society that involves a lostness and uncertainty or doubt about the efficacy of one's role and understanding. We would expect such variables to be negatively related to full professional performance; with teachers who feel more efficacious and knowledgeable about a consistent and certain role and society being more likely to innovate and share. All respondents were asked to indicate how they felt about the following items which respectively assess general feelings of being powerless, normless and lonely. Respondents placed their answers on a four-point scale ranging from "strongly agree" to "strongly disagree."

> It's only wishful thinking to believe that a person can really influence what's happening in society at large.
>
> I often wonder what the meaning of life really is.
>
> Sometimes I feel all alone in the world.

The value of all items were summed and a mean was taken in order to create the scale of general alienation in the following manner:

> Low general alienation refers to a mean score of less than 2.4.
>
> Medium general alienation refers to a mean score ranging from 2.4 to 3.0.
>
> High general alienation refers to a mean score ranging from 3.1 to 4.

The relationship between general alienation and professional role performance is presented in Tables 13A and 13B.

(Tables 13A and 13B here)

The data in these tables indicate no significant relation between general alienation and innovation or sharing.

Four other scale items were used to measure degree of felt anomie or the perception of societal normlessness or meaninglessness. Teachers were told that these items were statements which described the feelings of some people, and they were asked to indicate whether they strongly agreed, agreed, disagreed, or strongly disagreed with them. The four items were:

> With everything in such a state of disorder, it is hard for a person to know where he stands from one day to the next.
>
> Though people might not admit it, they are out for all they can get.
>
> Most people just don't give a "damn" for others and are ready to use any means to get to their goals.
>
> The trouble with the world today is that most people really don't believe in anything.

These four items were combined into a scale of anomie in the same way as the scale of general alienation. The data in Tables 14A and 14B indicate an inverse, although non-significant, trend in the relation between personal anomie and professional role performance. In general, those

TABLE 13A

GENERAL ALIENATION RELATED TO INNOVATION

Alienation	Innovation No	 Yes	Total
	(N=134)	(N=230)	(N=364)
Low	32%	68%	(N= 37)
Medium	39%	61%	(N=227)
High	33%	67%	(N=100)

$X^2 = 1.49$; NS

TABLE 13B

GENERAL ALIENATION RELATED TO SHARING

Alienation	Sharing Low	 High	Total
	(N=163)	(N=202)	(N=365)
Low	49%	51%	(N= 39)
Medium	45%	55%	(N=231)
High	42%	58%	(N= 95)

$X^2 = .54$; NS

teachers who felt least anomic were most involved in innovation and sharing.

(Tables 14A and 14B here)

The scales of anomie and general alienation exhibit a high degree of association with one another and with reliance upon authority. A summary of chi square operations examining the interrelationship of these three variables are presented in Table 15.

(Table 15 here)

It is clear from this table that teachers with a high degree of general alienation also feel there are few valid and reliable norms governing most persons' social behavior and that one must rely upon a few trusted experts who are available to provide leadership. Although these three variables relate significantly and positively with one another, it appears there are very minimal associations and no significant relations between these dimensions of teachers' personality styles and either educational innovation or sharing. General alienation and anomie may be just that, general: and while they may be relevant characteristics of one's orientation to themselves and to the society at large, they may not be relevant for these aspects of one's occupational and professional behavior.

In addition to these personality dimensions we asked a question designed to determine the social motives orientation and priorities of teachers. The question below elicits the relative dominance of needs for achievement (achieving personal goals, competent), affiliation (likeable, gaining friendships) and social power (be a leader, influential).

TABLE 14A

GENERAL ANOMIE RELATED TO INNOVATION

Anomie	Innovation Low	High	Total
	(N=134)	(N=230)	(N=364)
Low	29%	71%	(N= 58)
Medium	36%	64%	(N=230)
High	46%	54%	(N= 76)

X^2 = 4.32; NS

TABLE 14B

GENERAL ANOMIE RELATED TO SHARING

Anomie	Sharing Low	High	Total
	(N=163)	(N=202)	(N-365)
Low	39%	61%	(N= 59)
Medium	43%	57%	(N=230)
High	54%	46%	(N= 76)

X^2 = 3.67; NS

TABLE 15

SUMMARY OF CHI-SQUARE TABULATIONS RELATING THREE DIMENSIONS OF PERSONALITY STYLE

Variables Related	Chi-Square	df	Level of Significance	Direction
General Alienation-Anomie	50.3	4	$<.001$	Positive
Anomie-Reliance on Authority	12.1	2	$<.01$	Positive
Reliance on authority-General Alienation	10.7	2	$<.01$	Positive

This part is concerned with your interpersonal relationships with your teaching colleagues. The descriptive words or phrases at each end of the rating scales are not necessarily opposites. Please place a check-mark on one of the lines near the end of the scale that best describes how you would like your relationships to be with your colleagues.

My Relationships With My Colleagues in This
School as I would Like It To Be

influential :___:___:___:___:___:___:___:___: likeable

be a leader :___:___:___:___:___:___:___:___: achieving personal goals

gaining friendship :___:___:___:___:___:___:___:___: be a leader

competent :___:___:___:___:___:___:___:___: influential

likeable :___:___:___:___:___:___:___:___: achieving personal goals

competent :___:___:___:___:___:___:___:___: gaining friendship

Through the analysis of this question each social motive is compared with each other motive twice. Each motive receives from 1 to 5 points when compared with another, depending on how close to one pole or another a check is placed. Thus, if power (influential, be a leader) is checked in the space nearest that stem when twice compared to affiliation (likeable, gaining friendship), power receives 10 points and affiliation 2. The total power score is obtained by adding the power-affiliation score to the power-achievement score. The same scoring and tabulating operations are then done for both remaining motive categories. Table 16 shows the spread of the relative priorities of teachers regarding these categories of social motives.

(Table 16 here)

It is clear that teachers in this sample report a need for achievement as their most potent social motivator, with needs for affiliation second, and power relegated to a fairly minimal role. The relevance of concerns for

TABLE 16

SUMMARY OF TEACHERS' PRIORITIES OF SOCIAL MOTIVES

Motive	Score	N	%
Power	0-4	157	33
	5-9	242	51
	10-14	34	07
	15+	7	02
	NA	33	07
			100
Achievement	0-4	6	1
	5-9	176	37
	10-14	193	41
	15+	63	13
	NA	35	08
			100
Affiliation	0-4	39	08
	5-9	227	48
	10-14	127	27
	15+	43	09
	NA	37	08
			100

social power is so low that it is a suspect phenomenon and will be re-examined later. Table 17 summarizes several chi-square operations relating these social motive categories to innovation and sharing.

(Table 17 here)

The data in this table clearly indicate the lack of a significant association between these independent variables and the dependent indices of role performance. This suggests that neither innovation nor sharing are very widely perceived as ways of satisfying any of these social orientations. Teachers' needs for power or influence with colleagues, personal achievement, or social affiliation may all be sought and satisfied in ways other than through these professional role behaviors.

In summary, it appears that almost none of these personality or basic attitudinal orientations is significantly related to professional innovation and sharing. Teachers' orientations to change are positively related to sharing, but reliance upon authority, anomie and general alienation do not bear any systematic relation to either innovation or sharing. These three independent variables, however, are highly associated with one another and probably describe a somewhat unitary series of phenomena. None of the categories of social motives - power, achievement, affiliation - relate significantly to innovation and sharing. However, teacher's extraordinarily low self-report of the motive for social power is somewhat suspect; for 157 teachers (33%) power never establishes priority over affiliation or achievement on any of the stems utilized. We have speculated that this finding may be due in part to either poor instrumentation or defensive reactions inhibiting teachers' attribution of that motive. We plan to examine this question in connection with other assessments of

TABLE 17

SUMMARY OF CHI-SQUARE TABULATIONS RELATING SOCIAL NEEDS TO INNOVATION AND SHARING

Need	X^2	df	P.
A. Innovation			
Power	.13	1	NS
Achievement	2.60	2	NS
Affiliation	3.04	2	NS
B. Sharing			
Power	1.05	1	NS
Achievement	1.82	2	NS
Affiliation	3.81	2	NS

the same or similar variables elsewhere in this report. The general lack of significance of these personal style variables suggests that they may be too abstract and general, and that more specific statements of the relevance of such personality dimensions in the school or job may need to be employed. Moreover, it suggests that other interpersonal and organizational relations may in fact be more potent phenomena in terms of their effects on teacher role performance.

Commitment to the Teaching Profession

A variety of measures have been utilized to assess teachers' commitment to their profession. Some of these measures focus upon teachers' perceptions of their own roles and professional outlooks, others focus on their backgrounds and current status. Our general expectation is that teachers with the least marginality and greatest commitment to their teacher roles will be more devoted to full professional performance and thereby will innovate and share more than less committed colleagues.

The data indicate that teachers who come from families where another family member has been or now is a teacher are significantly more innovative than teachers without any history of teaching in their family. This finding conforms to one of Ryan's generalizations suggesting that "outstanding" teachers usually have a history of teaching in their families (1960). One explanation is that such family background lends additional support and understanding of the teacher role and commitments as well as establishing a tradition of educational professionalism. There is no relationship between this aspect of personal history and sharing.

With regard to other more contemporary characteristics the data seem to indicate that what one teaches may be less important than one's teaching experience. Whether a teacher is teaching in his own specialty or not is not related to innovation or sharing. On the other hand, the number of years a teacher has been teaching his present grade or subject is negatively related to innovation ($p. < .05$), as is the number of years a teacher has been teaching at his present school ($p. < 05$). Summaries of several chi-square operations performed with these variables are presented in Table 18.

(Table 18 here)

Further examination of these associations suggest that the relation between years of experience and innovation appear to be curvilinear in nature; teachers with a moderate amount of experience innovate most often, followed by teachers with little experience and then those with more time in that school or grade. It seems that not just newness, but newness plus some familiarity with the school or grade is optimal. With regard to all these variables the negative relation between experience and innovation is stronger than the relation between experience and sharing; the latter not being significant in any case. It is clear that age is significantly related to these experiential variables, since younger teachers have less specific and general experience. However, age itself is not related to innovation and sharing. Specific grade-relevant or school-relevant experiences seem to elaborate and heighten the effects of age or general experience.

Although a relation between general experience and innovation appears to be absent, a look at the source of innovations reveals that teachers with moderate experience (i.e., 4-12 years) more often invent their reported innovation. Newer teachers more often engage in the adaptation of others' ideas and teachers with the most experience more often adopt directly from a colleague or other source. Very new teachers may

TABLE 18

TEACHING EXPERIENCES RELATED TO INNOVATION AND SHARING

Variables Related	X^2 Value	df	Significance level	Direction
Innovation				
Years teaching present grade/subject	7.52	2	$<.05$	negative
Years teaching present school	6.74	2	$<.05$	negative
Years teaching	0.07	2	NS	
Sharing				
Years teaching present grade/subject	4.77	2	NS	
Years teaching present school	3.23	2	NS	
Years teaching	3.16	2	NS	

bring great vigor and fresh outlooks to the ideas of others, thus modifying and adapting innovations to fit their own style and class needs. More experienced teachers may be skilled enough to generate their own original practices. Older teachers may be lacking in the energy or fresh skill to generate new ideas or to substantially modify their colleagues; moreover, they may know and trust their colleagues enough to make direct adoption of their new classroom practices. This finding is primarily due to the effect of elementary school relations, since no such significant association is evident in secondary schools. These data broken down by instructional level are presented in Table 19.

(Table 19 here)

With regard to teachers' concerns and plans for the future, it is apparent that neither security in the form of tenure nor professional plans for the next ten years differentiate among teachers in terms of their innovation or sharing of classroom practices. Approximately 66% of the sample have teaching tenure and about 41% expect to be classroom teachers in ten years, but neither factor is relevant to these dimensions of professional role performance examined here.

In summary, neither innovation nor sharing are related to future plans regarding a teaching career or expectations. Sharing has no systematic relationships with other measures of commitment or marginality to one teaching profession. Innovation on the other hand, is significantly related to the relatively specific variables of professional experience teaching at the present school, or with the present grade or subject. It seems that the most innovative teachers are those whose experience give them the combined advantages of relative newness to the profession, plus

TABLE 19

EXPERIENCE RELATED TO SOURCE OF INNOVATION BY LEVEL OF INSTRUCTION

Experience & Level of Instruction	Innovation Source Adoption	Adaptation	Invention	Total
A. Elementary	(N=41)	(N=33)	(N=32)	(N=106)
<3 years	24%	54%	22%	(N= 46)
4-12 years	24%	20%	56%	(N= 25)
>13 years	46%	31%	23%	(N= 35)
	X^2 = 14.6; $p < .01$			
B. Secondary	(N=26)	(N=24)	(N=35)	(N= 85)
<3 years	30%	32%	39%	(N= 44)
4-12 years	37%	21%	42%	(N= 23)
>13 years	28%	28%	44%	(N= 18)
	X^2 = 0.9; NS			

some "time in grade". General experience, or years teaching overall, does not seem to be a relevant background for encouraging innovative teaching. Innovation is also related positively to the presence of teachers in the respondents own family, probably reflecting deeper familiar support for professional commitments. In general, the data in this section give only moderate support to the proposition that teachers more highly committed to their profession will more often innovate and share teaching practices.

Professional Orientation

In an attempt to examine the relationship between teachers professional priorities and their role behavior several questions assess teachers' perceptions and values about school priorities and their classroom emphases and daily activities. As one means to elicit information about teachers' values and orientations we asked them to name the most important educational objectives for their school system. Teachers were presented with a list of ten sample objectives and asked to select those four they felt were the highest priorities for their school system in the next two years.

> A school system cannot be all things to all people. Considering the staff in your school system, the financial support for the system, the kinds of children who attend the schools, and the attitudes of the community, what would you feel are the four primary objectives towards which effect should be put in your school system during the next two years? Put "1" by the most important, "2" by the next most, "3" by the next most important, and "4" for the next important. Remember you are thinking of objectives for this school system for the next two years. Use only the numbers 1, 2, 3, 4 to show the four objectives you feel are primary. Leave the other items blank.
>
> _____reducing the dropout rate
> _____improving attention to basic skills in the first three grades
> _____improving attention to physical health and safety of students
> _____increasing children's motivation and desire to learn
> _____improving learning opportunities for disadvantaged children
> _____increasing the percentage of college student attendance by seniors
> _____improving discipline and the behavior of "difficult" children
> _____improving quality of student academic achievement at all levels
> _____improving children's adherence to moral, ethical, and patriotic standards
> _____improving learning opportunities for gifted or talented children

The frequency of teacher responses to the alternatives in this question are presented in Table 20. There are no major differences between elementary and secondary schools in this regard; the only minor difference being a greater secondary school concern for reducing the dropout rate.

(Table 20 here)

The data clearly indicate that increasing motivation to learn and improving academic achievement are the most important objectives whether measured by first choices or totals of all four choices.

These two predominant choices also appear to be most relevant for our particular concerns regarding the improvement of classroom teaching practices. When the relation of responses to these items to professional role performance is examined the data indicate that teachers who ranked either one of these two objectives as the most important school objective tend to innovate and share slightly more than teachers who rank other objectives more highly. However, the relationship reported in Tables 21A and 21B, does not reach an accepted level of statistical significance.

(Tables 21A and 21B here)

These findings suggest that teachers' relatively short term objectives on their outlook for the direction of school efforts are not particularly relevant for their own professional role performance.

Teachers who report that they do innovate, and who choose either enhancement of motivation or improvement of academic achievement as the most important objective for the school system in the next two years tend to be adopters of others' practices more often than teachers who choose other objectives. Innovative teachers choosing the other objectives are more

TABLE 20

TEACHER CHOICES OF SCHOOL SYSTEM OBJECTIVES

Objectives	First Choice N	First Choice %	Total Choices N	Total Choices %
	(N=448)	(100%)	(N=1341)	(100%)
Reduce dropout rate	13	2.9%	60	4.5%
Skills in first three grades	68	15.2%	138	10.3%
Physical health and safety	11	2.5%	58	4.3%
Motivation to learn	160	35.6%	324	24.2%
Disadvantaged	37	8.3%	158	11.7%
College attendance	3	.7%	15	1.4%
Discipline	16	3.6%	124	9.1%
Academic achievement	99	22.1%	223	16.6%
Moral Standards	23	5.1%	134	10.0%
Gifted children	18	4.0%	107	7.9%

TABLE 21A

SCHOOL OBJECTIVES RELATED TO INNOVATION

Objective	Innovation No	 Yes	Total
	(N=132)	(N=224)	(N=356)
Motivation & desire to learn, academic achievement	33%	67%	(N=216)
Others	43%	57%	(N=140)

$X^2 = 3.30$; NS

TABLE 21B

SCHOOL OBJECTIVES RELATED TO SHARING

Objective	Sharing Low	 High	Total
	(N=158)	(N=198)	(N=356)
Motivation & desire to learn, academic achievement	40%	60%	(N=218)
Others	51%	49%	(N=138)

$X^2 = 3.72$; NS

often adapters of others' practices. Innovating teachers selecting either these or other objectives invent original ideas and practices in approximately the same ratio. It may well be that in dealing with the enhancement of motivation and improvement of academic achievement there may be many good practices available; therefore teachers interested in these objectives can just take over such existing practices for their own use without engaging in serious modifications or adaptations. Innovations directed toward other objectives may require more complex modifications of existing practices.

(Table 22 here)

A second measure was utilized to assess teachers perceptions of the current philosophies guiding their school policy as well as their desires for change in these policies. Teachers' perceptions of the current emphasis of their school was investigated by asking them to indicate, on the following question, which of the four orientations was most true of their schools; further they were asked to indicate which they would prefer to be the school's emphasis.

> One way of viewing the objectives of a school system is to look at the things the schools in it emphasize the most. Each of the four hypothetical schools listed below emphasized a different aspect of education. In column A please place a 1 next to the one that is most like your school, and a 4 next to the one that is least like your school. In column B please place a 1 next to the school which would, in your opinion, be the most desirable or "ideal," and 4 next to the school which would be the least desirable.

TABLE 22

MOST IMPORTANT SCHOOL OBJECTIVE RELATED TO SOURCE OF INNOVATION

School Objective	Adoption	Adaptation	Invention	Total
	(N=63)	(N=60)	(N=72)	(N=195)
Motivation to learn academic achievement	39%	26%	36%	(N=124)
Others	21%	39%	39%	(N= 71)

$X^2 = 7.24; p < .05$

	A Most like my school	B Most desirable or ideal
School #1 feels that the most important task of the schools is primarily intellectual; that is, to provide children with information about many things, teach them reading, writing and arithmetic, give them the ability to figure things out for themselves and a desire to learn more.		
School #2 is primarily interested in social things; that is, teaching children how to get along with others, to know about people in other countries and to be a good citizen who is loyal to America.		
School #3 is concerned with the personal development of students; that is, seeing that they possess a sense of right and wrong, develop into mature and stable persons who are in good physical condition, and learn to enjoy things like music and hobbies.		
School #4 is most concerned about the more practical things; that is helping students choose the right occupation or college, giving them specialized job training, and preparing them for marriage and family living.		

The frequency of teacher responses to each item assessing the perception of current emphasis is presented in Table 23.

(Table 23 here)

It is interesting to note the great disparity between elementary and secondary school teachers' perceptions of their schools' emphasis upon intellectual matters. Over two-thirds of the elementary school teachers feel that their main school emphasis is intellectual, while less than

TABLE 23

PERCEIVED SCHOOL PRIORITIES BY LEVEL OF INSTRUCTION

Priority	Elementary		Secondary	
	N	%	N	%
Intellectual	129	70%	58	31%
Social	7	04%	25	13%
Personal development	15	08%	38	20%
Practical	10	05%	47	25%
Multiple response	24	13%	20	11%
	185	100%	188	100%

one-third of the secondary school teachers feel that is their school's emphasis. Furthermore, secondary teachers perceive their schools as placing a greater emphasis on practical, personal development and social matters than do elementary teachers. It seems appropriate that elementary and secondary school teachers do not differ greatly on school system objectives, but do differ on their priorities for their own school or perhaps even classroom.

It is clear that these perceived emphases by no means reflect what many teachers feel should be the educational priorities of their school. The frequency of teacher responses to each item assessing desired emphases is presented in Table 24.

(Table 24 here)

The data in this table generally manifest smaller discrepancies between elementary and secondary school teachers than do the data in Table 23. Elementary school teachers apparently desire less of an emphasis upon intellectual concerns than they currently feel exist while secondary school teachers desire a greater emphasis. Other desired changes include elementary teachers' preferences for a greater priority upon personal development matters and secondary teachers' preferences for less emphasis on social matters.

When teachers' perceptions of actual school emphases, desired school emphases, and the discrepancy between actual and desired emphases are related to innovation and sharing, the data indicate that innovation is significantly related to preferred school emphases only. Those teachers who prefer an intellectual emphasis for their school are more innovative than teachers who prefer any or all other emphases. This phenomenon is consistent across instructional levels, suggesting that a commitment

TABLE 24

DESIRED SCHOOL PRIORITIES BY LEVEL OF INSTRUCTION

Priority	Elementary		Secondary	
	N	%	N	%
Intellectual	100	58%	72	39%
Social	12	07%	6	03%
Personal development	24	14%	36	20%
Practical	10	06%	39	21%
Multiple response	27	15%	30	17%
	173	100%	183	100%

to intellectual work, perhaps like an emphasis upon motivation to learn and academic achievement, may be associated with professional role performance.

In addition to these school system or school building level targets for the expression of professional perceptions and preferences, we asked teachers to describe certain aspects of the climate or atmosphere of their own classes. The classroom atmosphere not only reflects a teacher's teaching style, it is also the social environment most relevant to the teaching-learning process: as such it is an important index of professional role perspective. Teachers were asked to describe their actual and preferred classroom atmospheres in terms of ten dimensions. Each dimension was rated with a check on one of the eight spaces separating the two poles: beginning from the left, a check in one of the first three spaces indicates the left pole of the scale as most descriptive of the teacher's classroom atmosphere. Similarly, a check in the last three spaces indicates the right pole as most descriptive and a check in the middle indicates neither end of a dimension as descriptive of the teacher's classroom atmosphere.

friendly :___:___:___:___:___:___:___:___: business-like
individual activities :___:___:___:___:___:___:___:___: group activities
planned :___:___:___:___:___:___:___:___: spontaneous
active :___:___:___:___:___:___:___:___: passive
relaxed :___:___:___:___:___:___:___:___: attentive
formal :___:___:___:___:___:___:___:___: informal
controlled feelings :___:___:___:___:___:___:___:___: feelings expressed
pupil planned :___:___:___:___:___:___:___:___: teacher planned
lecture :___:___:___:___:___:___:___:___: discussion
cooperative :___:___:___:___:___:___:___:___: competitive

None of the teachers' ratings along each of these dimensions of classroom atmosphere are significantly related to innovation or sharing. But, in addition to a description of the "as is,"teachers were also asked to describe their "preferred" classroom climates. These preferences do not relate significantly to teacher innovation, but sharing is significantly related to ratings of preferred classroom atmosphere on the pupil planned - teacher planned dimension and along the formal - informal dimension. Teacher preferences for a pupil planned classroom are positively related to sharing ($p < .05$), as is a preference for an informal classroom ($p < .05$). These two items related to sharing but not to innovation, were further examined with respect to their relevance for certain types of innovations. The data in Table 25 show that teachers' perceptions of actual classroom atmosphere with respect to the pupil planned - teacher planned dimension are positively related to the innovation of practices high in behavorial orientation.

(Table 25 here)

Thirty three percent of the teachers who perceive their classroom atmosphere to be pupil planned, as compared with 16% of those who perceive it to be teacher - planned, use innovative practices that are more behaviorally oriented. It appears that a concern for pupil planning of classroom activities leads the teacher into a consideration of the dynamics of teacher - pupil and pupil - pupil interaction. A reasonable outgrowth of this particular concern might well be the attempt to design and utilize teaching - learning practices that focus on social behavior in the classroom.

TABLE 25

CLASSROOM PLANNING DIMENSION RELATED TO BEHAVIORAL ORIENTATION OF INNOVATION

Classroom Planning	Behavioral Orientation Low	 Medium	 High	Total
	(N=83)	(N=31)	(N=35)	(N=149)
Pupil-planned	45%	22%	33%	(N= 63)
Teacher-planned	64%	20%	16%	(N= 86)

$X^2 = 7.09; p < .05$

In an attempt to look at some of the activities associated with these and other dimensions of professional orientations, teachers were also asked to report how they spend their time during an average school day. These time and energy allocations were assessed through the following instrument:

Most teachers spend their time doing many different tasks at school. How do you spend your time during the average school day?

	a great deal	some	little	none
a. Teaching students academic material.	____	____	____	____
b. Discipling students	____	____	____	____
c. Counselling students	____	____	____	____
d. Keeping records and administrative duties	____	____	____	____
e. Serving on committees	____	____	____	____
f. Talking with colleagues about classroom practices	____	____	____	____

The frequency of teacher responses to the amount of time spent on each of these tasks is presented in Table 26.

(Table 26 here)

The data in Table 26 indicate that most teachers spend a great deal of their time in teaching academic material. Major differences between elementary and secondary school teachers are reflected in the elementary teachers report that they spend more time on disciplining students and teaching academic material. Twenty-four percent of the elementary school teachers spend a great deal of time disciplining students and only 8% of secondary school teachers spend that much time; 87% of the elementary

TABLE 26

PERCENT OF TIME SPENT ON VARIED TASKS DURING AVERAGE DAY

	Time					
Task	Great Deal	Some	Little	None	Total	
Teaching	80.4	14.7	2.4	2.4	99.9	(N=455)
Disciplining	15.7	46.5	34.6	3.1	99.9	(N=445)
Counselling	13.0	42.9	37.4	6.7	100.0	(N=447)
Administering Records	10.6	44.1	40.1	5.3	100.1	(N=454)
Serving Committees	3.4	23.1	46.7	26.8	100.0	(N=441)
Talking about practices	13.1	55.0	28.8	3.1	100.0	(N=451)

school teachers spend a great deal of time teaching academic material and only 74% of the secondary school teachers spend that much time teaching. One explanation for this discrepancy may be in the fact that secondary school teachers' days are officially compartmentalized to a greater degree than are elementary school teachers' activities. Thus, it is somewhat clearer when a secondary school teacher ends a teaching period and begins counselling or record - keeping. The elementary school teacher who is in the same room with the same students all day long may not clearly recognize when he actually stops teaching and starts disciplining or counselling; it all may appear within the temporal and conceptual context of teaching. Moreover, secondary school students may be able to work on their own more than younger students, and secondary teachers may not see such independent study periods or episodes as time spent teaching academic material. These differences appear to be consistent with the data in Table 23, where elementary school teachers reported a higher perceived and desired priority for intellectual matters than did secondary school teachers.

The data in Table 27A and 27B indicate that teachers who report that they spend a great deal of their time teaching academic material innovate significantly more often than teachers who spend less time on this task. Although the relationship is non-significant in the case of sharing there appears to be a positive trend between teaching academic material and sharing as well.

(Table 27A and 27B here)

When the relationship illustrated in Table 27A is controlled for the effects of instructional level it is clear that time spent teaching

TABLE 27A

TIME SPENT TEACHING ACADEMIC MATERIAL RELATED TO INNOVATION

Time Teaching	Innovation No	 Yes	Total
	(N=135)	(N=228)	(N=363)
Great deal	33%	67%	(N=294)
Some, Little, None	54%	46%	(N= 69)

$X^2 = 9.78$; $p < .01$

TABLE 27B

TIME SPENT TEACHING ACADEMIC MATERIAL RELATED TO SHARING

Time Teaching	Sharing Low	 High	Total
	(N=162)	(N=201)	(N=363)
Great deal	42%	58%	(N=295)
Some, Little, None	54%	46%	(N= 68)

$X^2 = 3.28$; NS

academic material is related significantly to innovation in secondary schools only. In elementary schools such an overwhelmingly large percentage of the teachers report this time priority (87%), that there is little room for differences in the tendency to innovate (X^2=0.0; NS). The demands for such great time priorities upon academic teaching are evidently less universal at the secondary school level (70%); enough room for difference does seem to exist here, and those teachers that do spend a great deal of time on this task are more innovative (X^2=15.1; $p < .001$).

In summary, it appears that teachers give high priority to school goals such as increased motivation to learn and improving academic achievement, and see a stress on intellectual objectives in their schools. By and large teachers who strongly support these emphases seem to innovate more often than teachers perceiving or preferring alternatives. Teachers who feel that the most important priority for their school is students' intellectual growth innovate significantly more often than do teachers reporting social, personal or practical priorities. Teachers who spend a great deal of time teaching academic material innovate more often than do teachers spending less time on this task. Teachers who hold other values do not appear particularly innovative. Classroom climate preferences regarding informal teaching styles and the use of pupil planning seem to be related to more behaviorally oriented innovations. On several of these variables it appears that elementary school teachers feel their schools stress intellectual priorities, prefer this stress and spend more time on teaching academic material than do secondary school teachers. Several interpretations of this phenomenon have been offered including the nature of other school priorities competing for the attention of secondary school teachers and the lack of clear divisions between teaching, disciplining and counselling at the elementary school level.

Summary of Personal Characteristics

Four different aspects of teachers' personalities, personal values and personal background characteristics are explored in this chapter. The general variables investigated include: (1) general background and demographic factors; (2) personality styles and attitudes; (3) background and commitment to the teaching profession; and (4) professional values and orientations. Within each cluster of variables a number of specific traits or characteristics are examined and related to the professional role outcomes of innovation and sharing of teaching practices.

In general,it appears that teachers who come from rural backgrounds and from lower middle class families are less likely to innovate and/or share teaching practices than are more urban teachers and ones from laboring or upper middle class families. In addition, teachers who come from homes where a parent or sibling is or was a professional educator are more likely to innovate than persons without this supportive background. Teachers' sex, age, marital status, parental status and religious affiliation are not significantly related to either innovation and sharing; but degree of church attendence is negatively related to sharing. General experience in the profession and whether a teacher is trained in the specialty in which he is teaching are not related to innovation and sharing; but experience with a particular grade level or subject matter course is significantly related. Comparative newness to one's role as teacher, in combination with enough experience to draw upon for growth seems to be an optional condition. Future plans for education as a career as well as the current security of a tenured status are not significantly related to the aspects of professional role performance investigated here.

In general, broad and basic personality and attitudinal predispositions examined in this chapter do not relate significantly to teachers' innovation and sharing of teaching practices. Feelings of general alienation, anomie and reliance upon external authority, as well as a variety of basic social motivations, are not related significantly to the dependent variables. However, more specific value preferences or perceptions of ideological or philosophical trends in schools are significantly related in several instances. For instance, teachers' concerns for academic excellence, whether in their own classroom, their school, or their school system is generally related to innovation of classroom practices. These predispositions are not, however, related to sharing. Privately held attitudes about self, others and educational issues may well not be important aspects of peer commerce, and therefore not essential to the more peer-related aspects of role performances associated with the sharing of teaching practices.

Both the findings with regard to background factors and attitudinal factors suggest that abstract and broadly concerned variables are not very potently associated with innovation and sharing. But background and experience variables that are concretely and specifically related to one's immediate position, or attitudinal predispositions that are focussed on concrete and highly relevant professional issues, do seem to be related to professional role performance. Both kinds of variables will be reviewed further to determine how they related to other independent and interviewing variables in later chapters.

Among teachers who report that they are innovating, those who stress concern for pupil planning, as opposed to teacher planning, more often are engaged in trying out behaviorally oriented practices. Furthermore, secondary school teachers with relatively fewer course credits beyond the B.A. degree report innovating behaviorally oriented practices more often than secondary school teachers with more credits or with an M.A. degree. Teachers who are particularly concerned with the improvement of students' academic motivation and achievement more often adopt others' innovation for their use rather than modifying others' practices or inventing original ones. The same is true for teachers with young children at home and for elementary school teachers with many years of experience. Relatively inexperienced elementary school teachers more often adapt or modify others' practices for their use, while those with intermediate experience more often invent their own original innovations.

Throughout this chapter it has been clear that there are interesting and important differences between elementary and secondary school teachers' backgrounds, values and styles. The personnel as well as the primary educational tasks of these separate institutions are quite different. The following chapters more closely examine interpersonal and institutional aspects of teachers' role performance; a focus which should shed additional light on the structural as well as procedural characteristics of these different educational organizations.

CHAPTER IV

COLLEAGUE INTERPERSONAL RELATIONS

The interpersonal relations among teachers in a school staff constitute an important set of variables that influence professional role performance. The primary data in this chapter are teachers' perceptions of their interpersonal relations thus the stress is upon their own phenomenology. Teachers' feelings of alienation from the school system are also examined with the expectation that they are associated with staff interpersonal relations and professional innovation and sharing. In short, teachers' interpersonal relations will be treated as a set of independent variables; teachers' alienation from the school system either as an intervening or corollary variable; and professional role behavior in the form of innovation and sharing as dependent variables.

The first variable explored in this chapter is teachers' sense of alienation from school. In distinction from the general type of alienation investigated in Chapter III, more specific aspects of teachers' relations to the local situation, their profession and colleagues are examined here. Feelings of powerlessness, isolation, involvement and dissatisfaction are among the components of this measure of alienation from school. It is our expectation that teachers least alienated from school, e.g., those feeling more powerful, more in touch with others, more involved and more satisfied, should be engaged in more innovation and sharing.

The specific aspects of colleague interpersonal relations to be considered in this chapter include power and influence relations, cohesivenss or attraction patterns and participation in the professional communication network and staff exchange. All three of these sets of variables should be positively related to both innovation and sharing. Particularly when these dimensions of staff relations are public in character they should have even more important associations with sharing than with innovation.

Teachers who see themselves and their colleagues as having some influence upon each other and upon the determination of school policy are expected to be more involved in innovation and sharing. This sense of one's own influence can be seen as a hallmark of satisfaction with the power and integrity incumbent upon a fully developed role as a professional. Items used to assess these variables include:

Power or influence relations

1. Reported personal influence in school matters and preferred personal influence.
2. Attributed peers' influence on school policy.
3. Colleague nomination as influential.

The second major dimension of colleague relations examined here focusses on teacher perceptions of the cohesiveness and personal attractiveness of their staff relations, as well as colleagues liking preferences. Teachers who feel they like their colleagues and whose colleagues like them, are more likely to feel free enough to try new ideas and welcome enough to share them with their colleagues. Items used to assess these variables include:

Cohesiveness or Attractiveness of interpersonal relations

1. Staff cohesion as reported by diagram
2. Perceived personal position in the school social structure.
3. Teachers' perception of staff's impersonality.
4. Colleague nominations as well liked.

A teacher's participation in the staff communication system and professional exchange activities may expose him to different teaching goals and practices. However, the degree of concentration on the improvement of classroom learning also may be adversely affected by exposure to other professional priorities and goals, especially if these are conflicting in nature or many in number. Professional exchange may be particularly important in facilitating teacher sharing since sharing, unlike innovation, is necessarily a public act requiring exchange opportunities. Items used to assess these variables include:

Participation in professional exchange

Informal channels of conversation

1. Inclusion in communication sociometric
2. Patterns of travel to school
3. Time spent talking about classroom practices

Formal channels of membership in professional groups and meetings

1. School committees
2. Educational associations
3. Educational meetings outside of the school system

Alienation from School

A full commitment to professional role performance is likely to require that teachers be relatively satisfied with that role and with the social situation in which that role is played out. In this regard teachers who feel least alienated from school are most likely to be involved in the innovation and sharing of teaching practices. Those who feel more alienated are more likely to expend less physical, emotional or intellectual energy on the improvement or refinement of their professional behavior, or on the tough task of sharing their ideas with colleagues.

The scale for assessing teachers' alienation from school consists of nine items selected from instruments used in other research. The items were presented to subjects as statements which described the feelings of some teachers, and they were asked to indicate on a four-point scale whether they almost always, often, sometimes, or very seldom felt this way:

> I do things at school that I wouldn't do if it were up to me.
>
> I have a lot of influence with my colleagues on educational matters.
>
> I am just a cog in the machinery of this school.
>
> I feel close to other teachers in this school.
>
> Though teachers work near one another, I feel as if I am on an island by myself.
>
> In the long run it is better to be minimally involved in school affairs.
>
> I feel involved in a lot of activities that go on in this school.
>
> I find my job very exciting and rewarding.
>
> I really don't feel satisfied with a lot of things that go on in this school.

These nine items were designed to measure four variants of alienation. Items 1 through 3 seek to measure feelings of powerlessness; items 4 and 5 isolation, items 6 and 7 involvement in school activities, and items 8 and 9 dissatisfaction. It is important to note that these items were not ordered as above in the questionnaire, but were distributed randomly among a number of other items. Further, the above items are keyed in both positive and negative directions in order to avoid the effects of respondent mental set and social desirability biases. For our purposes a general scale, as well as a number of subscales, can be devised by using these nine items. Using mean scores on all nine items, an overall scale of alienation from the school system was devised in the following manner:

> Low alienation refers to a mean score of 2.0 or less.
>
> High alienation refers to a mean score of 2.1 or more.

Similarly, subscales of feelings of powerlessness, of isolation, of non-involvement, and dissatisfaction were devised. For instance, the scale of powerlessness was devised from the three items above in the following manner:

> Low powerlessness refers to a mean score of 1.5 or less.
>
> Medium powerlessness refers to a mean score ranging from 1.6 to 2.4.
>
> High powerlessness refers to a mean score of 2.5 or more.

Scales for the other three components were devised in the same manner and by using the same cutoff points.

The four components of the scale of alienation from school are related to one another as illustrated in Table 28.

(Table 28 here)

Moreover, Barakat reports that scores on the total scale of alienation from school is positively and significantly related both to general alienation and to anomie (1966, p.111-112). This finding suggests a

TABLE 28

SUMMARY OF CHI-SQUARE PROCEDURES RELATING SUBSCALES OF ALIENATION FROM SCHOOL

Subscales Related	Value	df	Chi-Square Significance level	Direction
Isolation & dissatisfaction	18.16	4	<.01	positive
Powerlessness & dissatisfaction	18.19	4	<.01	positive
Noninvolvement & dissatisfaction	18.71	4	<.01	positive
Noninvolvement & isolation	25.27	4	<.01	positive
Noninvolvement & powerlessness	20.52	4	<.01	positive
Isolation & powerlessness	24.34	4	<.01	positive

consistency in the way persons relate to the variety of social systems of which they are members, but it does not clarify any cause and effect assumptions regarding school or societal alienation.

Table 29 indicates that alienation from school is significantly higher for secondary school teachers as compared with elementary school teachers.

(Table 29 here)

Other aspects of the phenomenon of school alienation as well as its effects at different levels of instruction, are clarified by the data in Tables 30A and 30B which indicate the extent to which alienation is related to the innovation and sharing of teaching practices at both elementary and secondary levels of instruction.

(Tables 30A and 30B here)

Alienation is significantly and negatively related to both innovation and sharing in secondary schools. In those schools the less alienated teachers appear to do more innovating and sharing. In elementary schools the relation between alienation and these aspects of professional role behavior follows the same trend but does not approach an acceptable level of statistical significance. The findings that alienation is higher in secondary schools, and that the relation between alienation and the dependent variables are significant only in secondary schools, may be explained partially by the consideration that secondary schools are unlike elementary schools in several respects, not only with regard to the client population they serve. In Chapter 3 we noted some of the differences among the teacher populations at these different instructional levels. The sex, age and educational composition of staffs are among these teacher characteristics that differ. Moreover, these two quite

TABLE 29

ALIENATION RELATED TO LEVEL OF INSTRUCTION

Alienation	Elementary	Secondary	
	(N=232)	(N=230)	
Low	59%	41%	(N=259)
High	39%	61%	(N=203)

$X^2 = 16.9; p < .01$

TABLE 30A

ALIENATION RELATED TO INNOVATION BY LEVEL OF INSTRUCTION

Level of Instruction and Alienation	Innovation No	Yes	Total
A. Elementary	(N=64)	(N=118)	(N=182)
Low Alienation	34%	66%	(N=122)
High Alienation	37%	63%	(N= 60)
$X^2 = .09$; NS			
B. Secondary	(N=74)	(N=112)	(N=186)
Low Alienation	31%	69%	(N= 87)
High Alienation	47%	53%	(N= 99)
$X^2 = 5.21$; $p < .05$			

TABLE 30B

ALIENATION RELATED TO SHARING BY LEVEL OF INSTRUCTION

Level of Instruction and Alienation	Sharing No	Yes	Total
A. Elementary	(N=91)	(N= 91)	(N=182)
Low Alienation	46%	54%	(N=120)
High Alienation	58%	42%	(N= 62)
$X^2 = 2.46$; NS			
B. Secondary	(N=74)	(N=111)	(N=185)
Low Alienation	28%	72%	(N= 85)
High Alienation	50%	50%	(N=100)
$X^2 = 9.07$; $p < .005$			

different populations must also be affected by the different tasks, and status rewards and organizational characteristics at different instructional levels. Secondary schools are typically larger than elementary schools and teachers have less sustained contact with any single group of students. Secondary schools also are highly organized along departmental lines and responsibilities, further fragmenting potential relations among teachers. One's relations with colleagues, and particularly one's feelings about alienation or integration with the school may be much more pertinent for these teachers under these circumstances. Elementary teachers may work in an environment that forces them to work together closely and where feelings of alienation are simply not very relevant. At the very least, these particular data and interpretations further support the proposition that there may be some very different professional styles and norms for secondary as distinguished from elementary school teachers.

In summary, these general data suggest that our expectations regarding the negative relation between alienation from school and professional performance is confirmed for secondary schools. In those schools, teachers who feel more involved and integrated into various aspects of school life more often innovate and share classroom practices.

Power and Influence Relations

We have several expectations regarding the relationship between teachers' feelings and reports of their influence and their participation in the innovation and sharing of teaching practices, as well as their alienation from the school system. Among these expectations are the following: (1) The more teachers feel they have influence in determining educational matters, the more they will tend to innovate and share, and the less they will feel alienated from the school system; (2) The more teachers see their colleagues as influential in determining educational matters the more they will innovate and share and the less they will feel alienated; (3) The more teachers are seen by their colleagues as influential in developing staff opinion, the more they will tend to innovate and share, and the less they will feel alienated.

One measure of teachers' feelings of personal power consists of the extent to which teachers perceive themselves as influential in determining educational policy matters at school. Teachers are asked first to indicate how much influence they feel they personally have in determining educational policy; i.e., whether they have no influence, a little influence, some influence, or a great deal of influence. A second measure asks teachers the same question about their colleagues' influence. These two measures are part of a broader series of questions posed as follows:

1. In general how much influence do you think the following groups or persons have in determining educational matters (e.g., curriculum, policy, etc.) in this school? Place a check in the box that best describes the influence ability of each of a-e.

	no infl.	a little infl.	some infl.	a great deal of infl.
a. The local school board				
b. Your superintendent				
c. Your principal				
d. Your teaching colleagues in general				
e. You, personally				

2. In your opinion, how much influence should each of these groups or persons have in determining educational matters (e.g., curriculum, policy, etc.) in this school?

The responses to these questions are presented in figure 3.

(Figure 3 here)

It is noteworthy that teachers preceive current influence distributed in a strongly hierarchal manner, with the school board and superintendent seen as having considerably more influence than the principal, colleagues or oneself. The curve of preferred influence distribution differs markedly in several respects; the school board's role is substantially diminished while colleagues and oneself are accorded much more powerful roles. The principal and colleagues as opposed to the school board and superintendent are the most powerful elements in this second curve of school decision making. In general the point where the curves cross each other illustrates teachers' preferences for more influence closer to home and less from sources located outside their local social system.

The proposition that the more teachers feel they are personally influential, the more they should innovate and share educational practices, gains significant positive support from the data reported in Tables 31A and 31B.

(Tables 31A and 31B here)

The data in Table 31A indicate that 73% of those who feel they have high influence report that they innovate as compared to 27% who do not so report; only 54% of the teachers who feel they have low influence report that they innovate. Table 31B indicates that 71% of those who think they have a high degree of influence do a high degree of sharing with their colleagues; only 43% of those teachers with feelings of low influence are engaged in a high degree of sharing. These findings are congruent with those of an earlier study reported by Chesler (1966).

It appears from Tables 32A and 32B that teachers' professional behavior tends to be almost as highly related to their perceptions of

Figure 3

TEACHERS PERCEPTIONS AND PREFERENCES OF VARIOUS PARTIES' INFLUENCE ON SCHOOL POLICY

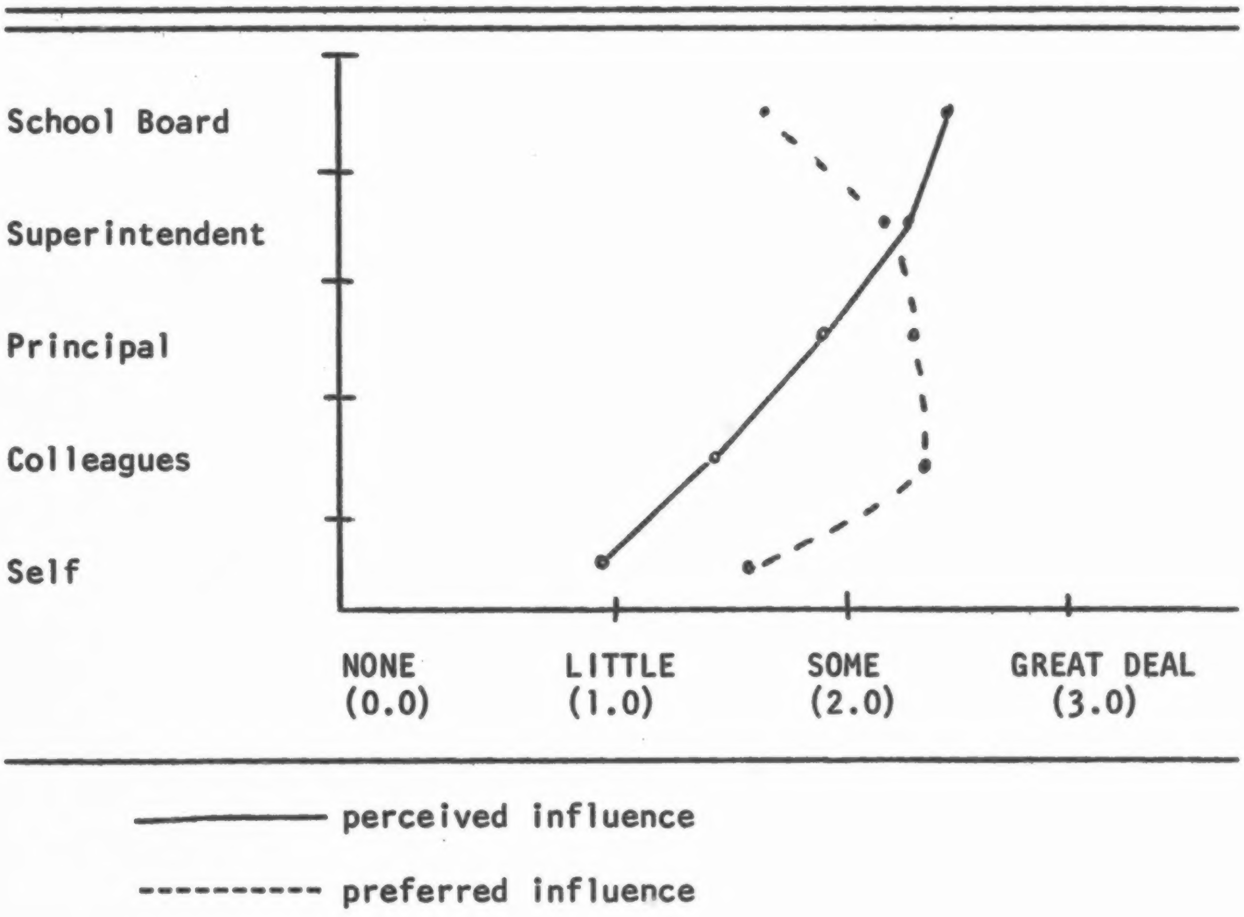


TABLE 31A

PERCEIVED PERSONAL INFLUENCE RELATED TO INNOVATION

Influence	Innovation No	Yes	Total
	(N=135)	(N=224)	(N=359)
Low	46%	54%	(N= 91)
Medium	39%	62%	(N=182)
High	27%	73%	(N= 86)

$X^2 = 7.25;\ p < .05$

TABLE 31B

PERCEIVED PERSONAL INFLUENCE RELATED TO SHARING

Influence	Sharing Low	High	Total
	(N=162)	(N=199)	(N=361)
Low	57%	43%	(N= 92)
Medium	46%	54%	(N=182)
High	29%	71%	(N= 87)

$X^2 = 13.59;\ p < .01$

colleagues' influence on school policy as their own influence.

(Tables 32A and 32B here)

Tables 32A and 32B indicate that the more teachers perceive their colleagues, in general, as influential the more they themselves share teaching practices. The findings with regard to innovations show a similar although non-significant trend. Thus the sense that the social system of the school is influencable by others like themselves, also seems to be related to professional role behavior.

If some feelings of influence on local school policy are thought to be relevant for the fulfillment of one's professional role, and hence innovation and sharing, it was our expectation that teachers who desire greater amounts of power should be even more likely to fulfill this professional role component. But the data do not confirm this expectation at all; teachers' desires for less, the same, more or much more self or colleague influence are not related to either innovation or sharing. It would appear from these findings that teachers' desires are not as important as their perception of the actual state of affairs of the school's influence system.

Desires for influence may be relevant, however, when considered in conjunction with perceptions of the real state of affairs. Whenever the actual and desired states are not the same there is a discrepancy which signifies teachers' report of an inappropriate or unsatisfactory situation. Such a discrepancy or dissatisfaction with the influence pattern should be related negatively to professional role performance. Chesler (1966) confirms this expectation in his report that the existence of a discrepancy between the amounts of influence a teacher feels he has and the amount he feels he should have is related negatively to innovation. Teachers who

TABLE 32A

PERCEIVED COLLEAGUES' INFLUENCE RELATED TO INNOVATION

Influence	Innovation No	 Yes	Total
	(N=136)	(N=227)	(N=363)
Low	43%	57%	(N=190)
Medium	34%	66%	(N=129)
High	25%	75%	(N= 44)

$X^2 = 5.75;\ p > .05 < .10$

TABLE 32B

PERCEIVED COLLEAGUES' INFLUENCE RELATED TO SHARING

Influence	Sharing Low	 High	Total
	(N=162)	(N=201)	(N=363)
Low	52%	48%	(N=190)
Medium	39%	61%	(N=129)
High	32%	68%	(N= 44)

$X^2 = 9.00;\ p < .01$

desire much more influence than they feel they have are significantly less likely to innovate classroom practices than those teachers who feel satisfied with the influence they have, or those for whom there is minimal discrepancy between their felt and desired power. Taken together, these findings suggest that when teachers feel that individually and collectively they have influence on the determination of local educational policy they tend to innovate and share more. Professional role behavior is thus not only related to individual feelings of legitimate and appropriate influence or power, but to individual notions that others of similar status -- "their class" -- have influence.

A third device used to measure teachers' influence in their school present teachers with a sociometric instrument and ask them to identify those three colleagues they felt were most influential in developing staff opinion about educational matters.

> Please list numbers of the three people in this school who you feel are most influential in developing staff opinion about what is "good" and "poor" teaching.

When teachers' personal power is measured in terms of the reception of peer nominations regarding influence, the data show that those teachers who receive more nominations are more involved in professional sharing. But expectations regarding the relationship between received nominations of influence and innovation do not gain significant support on this instrument.

(Tables 33A and 33B here)

Self-reports of teaching innovations may reflect only private activity within one's own classroom, and such activity may not be visible to peers making sociometric nominations. The measure of sharing, however, deliberately includes peer-reports and colleagues' perceptions of a

TABLE 33A

SOCIOMETRIC NOMINATIONS OF INFLUENCE RELATED TO INNOVATION

	Innovation		
Influence	No	Yes	Total
	(N=140)	(N=235)	(N=375)
None	38%	62%	(N=182)
Low	36%	64%	(N= 70)
Medium	45%	55%	(N= 58)
High	31%	61%	(N= 65)

$X^2 = 2.69$; NS

TABLE 33B

SOCIOMETRIC NOMINATIONS OF INFLUENCE RELATED TO SHARING

	Sharing		
Influence	Low	High	Total
	(N=169)	(N=206)	(N=375)
None	49%	51%	(N=178)
Low	46%	54%	(N= 72)
Medium	52%	48%	(N= 61)
High	25%	75%	(N= 64)

$X^2 = 13.68$; $p < .01$

teacher's professional activity; logically sharing should be more highly related than innovation to peer sociometric nominations. Since sharing is a public activity by definition, it is our expectation that sharing will consistently be related more highly with other public reports and nomination indices of staff peer relations.

These three measures of teachers' influence or power clearly are not identical, and in only two instances are they related. The two self-report measures of personal influence and colleagues' influence are highly related ($X^2 = 192$. $p. < .001$), and the self-report of personal influence is highly related to peer nominations received as influential ($X^2 = 26.6$; $p. < .001$). But self-reports of colleagues' influence and peer nominations of self are not related significantly. This latter finding is quite reasonable since at face value these are very different variables and there is no logical basis for suspecting them to be related to one another.

Another measure of power and influence concern was examined in Chapter 3; power as a basis for social motivation and a focus for human relationships. This measure relates positively and significantly to teachers' perceptions of their own power ($X^2 = 11.9$; $p. < .05$) and to peer nominations received as influential ($X^2 = 38.8$; $p. < .001$). But, strangely enough, it only manifests a weak and insignificant positive association with teachers' desires for influence ($X^2 = 9.1$; $p. > .05 < .10$). The latter relationship was expected to be the most powerful one, on the assumption that role preferences would be most highly related to social motivations. The data in this matter are quite confusing and may lead to one or more of several conclusions: (1) the instruments used do not assess the qualities we think they do, particularly with regard to social motivation factors; (2) the instruments do assess the qualities we think they do and social power motivations are simply not related to certain of these other independent and dependent variables; (3) responses to the social motivation items do not reflect reported attitudes but defenses against admission of high power needs in a relatively low power role. We do not have adequate data to resolve these possibilities at this point.

The major theoretical propositions undergirding this chapter also proposed that teachers' feelings of alienation from school should be negatively related to their perceived power or influence. Table 34 demonstrates the relationship between alienation and the three influence measures utilized here.

(Table 34 here)

The data very clearly indicate a significantly inverse relationship between alienation and each measure of influence. The more influence teachers feel they personally have, the more influence they feel their colleagues have and the more influence attributed to them by their colleagues the less alienated they feel. When the variables of personal feelings of influence and low alienation are combined,they accentuate the positive relationship between either one and the dependent variables of professional performance. Teachers who feel they have substantial influence and who feel minimally alienated from life in the school are especially prone to innovate and share classroom practices.

In summary, the findings regarding teachers' feelings of power and influence confirm our expectations in most regards. Feelings of greater influence exerted by self and colleagues tend to be related positively

TABLE 34

VARIOUS INFLUENCE MEASURES RELATED TO ALIENATION

Influence Measures	Alienation Low	 High	 Total
A. Personal influence	(N=251)	(N=197)	(N=448)
Low	37%	63%	(N=115)
Medium	56%	44%	(N=227)
High	77%	23%	(N=106)
$X^2 = 35.74$; $p < .01$			
B. Colleague influence	(N=254)	(N=199)	(N=453)
Low	47%	53%	(N=236)
Medium	63%	37%	(N=164)
High	75%	25%	(N= 53)
$X^2 = 17.9$; $p < .01$			
C. Peer nomination on influence	(N=259)	(N=203)	(N=462)
None	48%	52%	(N=237)
Low	59%	41%	(N= 83)
Medium	58%	42%	(N= 66)
High	76%	24%	(N= 76)
$X^2 = 19.12$; $p < .01$			

to both aspects of professional role performance, although the relationship to sharing is more consistently significant than to innovation. The latter, a more private activity, is most highly related to personal feelings of one's own influence and non-significantly associated with perceptions of colleagues' influence and nominations by colleagues. Sharing of classroom practices is significantly related to greater amounts of influence on all three variables. Teachers desires for more or less influence are not related significantly to innovation or sharing, but the degree of discrepancy between reports of actual and desired personal influence is significantly and negatively related to innovation. These findings regarding the powerful effects associated with personal influence further cast suspicion upon the report in Chapter III of a low priority of needs for social power and influence, and the absence of a relation between such needs and innovation and sharing. It may well be that teachers were hesitant or defensive about expressing such needs, preferring to emphasize achievement and affiliation as more legitimate orientations for professionals. In general, secondary school teachers see their colleagues as having less influence than elementary school teachers see their colleagues as having ($p. < .05$). This finding may help confirm and further explain the higher incidence of teacher alienation found in secondary schools. Finally, the data indicate that greater feelings of power on all three measures is significantly and negatively related to feelings of alienation from the local school system. The more felt influence the more felt involvement and integration in the school; the less felt influence the more alienation.

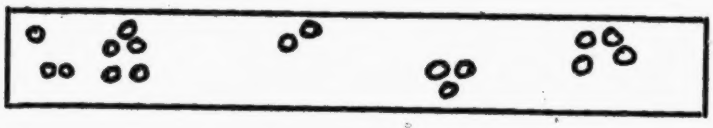
Interpersonal Attraction and Cohesiveness

The concept of cohesiveness in teachers' interpersonal relationships refers to feelings of solidarity or attraction among members of the same school staff. Close and friendly patterns of peer interaction are expected to serve as stimulants and supports for the fulfillment of professional role commitments. In this respect greater feelings of cohesiveness should lead consistently to greater innovation and sharing. Four different measures are utilized to assess the attraction patterns among staff members; (1) teachers' perceptions of the interaction patterns in school; (2) their perception of their own position within that pattern; (3) a series of questions assessing the degree of personal concern and contact within the staff; and (4) a sociometric nomination question focussing on liking choices. Alienation from school should be related negatively to these measures of interpersonal attraction and cohesiveness. Teachers who are better liked and feel more included in a staff network of personal relations should be less alienated.

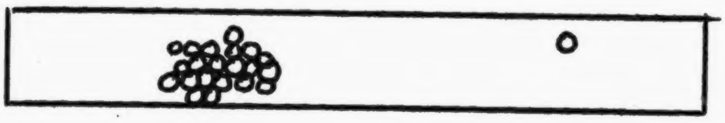
The first measure presents teachers with a series of diagrams representing different maps of staff social relations ranging from monolithic cohesiveness to chaotic disintegration. They are asked to indicate which one of the following diagrams most nearly represents the social relations among teachers in their school.

If you were to look at this staff of teachers as a group, which one of these drawings would most nearly look like this staff?

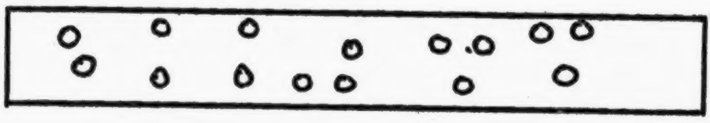
a. ----



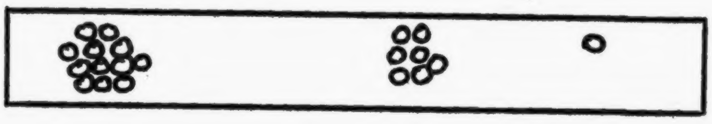
b. ----



c. ----



d. ----



Other -- please draw

e. ----

Elementary and secondary school teachers systematically report different perceptions of their schools' social relations' diagram. Elementary school teachers more often select patterns b and c as most descriptive of their school, while secondary teachers more often select patterns a and d. These differences are statistically significant $(X^2 = 39.3 = p < .01)$ and further support earlier evidence pointing toward the varied and complex organizational issues at work at these separate levels of instruction. We have already discussed how secondary schools are highly organized along departmental lines which encourage subgroup formations. In addition, secondary schools are usually considerably larger than elementary schools, further stimulating the development of cliques and subgroups.

Regardless of these organizational differences, within and including both instructional levels this measure of staff cohesiveness was not found to be related significantly to professional innovation or sharing.

(Tables 35A and 35B here)

Although these relations are not statistically significant, there is a trend for the teachers selecting the most cohesive pattern to innovate and share to a greater extent than their colleagues. This non-significant trend does support Chesler's (1966) report of pilot study data regarding innovation in elementary schools. According to some interpretations a staff organized in small subgroups should be considered most cohesive, since members can truly support one another in such face to face groups. It is interesting that the staff pattern of dyad and triad formation is associated with innovation and sharing more highly than either the disintegrated pattern or the staff diagram of two large groups. The lack of significance for these data may be partly explained by the fact that the different drawings may have meant different things to different teachers. The concept of cohesiveness, as well as private interpretations of diagrammatic patterns, would have been most useful to assess.

A second measure of teachers' feelings of staff attraction and cohesion derived from the diagram above by asking each respondent to go over the pattern he selected and place an "X" within the circle best representing his own position in that staff. In this way we were able to tell whether a teacher perceived himself as an isolate, as a member of a dyad or triad, or as a peripheral or central member in a large group. Secondary school teachers systematically placed themselves in the center or on the periphery of large groups (71%) more often than did elementary school teachers (55%). Conversely, elementary school teachers more often

TABLE 35A

STAFF DIAGRAM RELATED TO INNOVATION

Diagram	Innovation No	 Yes	Total
	(N=135)	(N=223)	(N=358)
One group	30%	70%	(N= 46)
Two groups	43%	57%	(N=100)
Dyads and Triads	36%	64%	(N=142)
Disintegrated	39%	61%	(N= 70)

$X^2 = 2.42$; NS

TABLE 35B

STAFF DIAGRAM RELATED TO SHARING

Diagram	Sharing Low	 High	Total
	(N=161)	(N=199)	(N=360)
One group	37%	63%	(N= 46)
Two groups	48%	52%	(N=104)
Dyads and Triads	44%	56%	(N=146)
Disintegrated	47%	53%	(N= 64)

$X^2 = 1.79$; NS

placed themselves in small groups or as isolates. These reports occur despite the fact that elementary teachers more often see a school pattern of one large group and secondary teachers more often see a school pattern of small groups and large groups. In other words, teachers perceptions of their own position in the social relations' network is not completely constrained by the pattern they see as pervading the school. Teachers' self-placement in this network is not related significantly either to innovation or sharing. However, teachers who place themselves in the center of staff clusters appear to innovate and share more often than others, while teachers who place themselves on the periphery of such clusters are least likely to innovate and share practices.

A third measure of staff attraction patterns and cohesiveness asks teachers to indicate on a four-point scale to what extent the following statements characterize the informal climate of their school.

Teachers visit each other socially at home.
Our teaching staff has a high esprit de corps.
Teachers talk about their personal lives with other faculty members.

A scale assessing the impersonal or personal character of staff relationships was devised in much the same way as earlier scales of alienation. Tables 36A and 36B illustrate the relationship between impersonal staff relations and professional role behavior.

(Tables 36A and 36B here)

It is evident that this dimension of staff interaction is not significantly related to innovation, but is negatively related to sharing. That is, teachers who feel staff relations are less impersonal and more intimate and friendly are more likely to share classroom practices than those teachers who see staff relations as more impersonal and distant.

TABLE 36A

IMPERSONAL STAFF RELATIONS RELATED TO INNOVATION

Impersonal Relations	Innovation No	 Yes	 Total
	(N=138)	(N=232)	(N=370)
Low	33%	67%	(N=129)
High	39%	61%	(N=241)

$X^2 = 1.33$; NS

TABLE 36B

IMPERSONAL STAFF RELATIONS RELATED TO SHARING

Impersonal Relations	Sharing Low	 High	 Total
	(N=166)	(N=203)	(N=369)
Low	37%	63%	(N=134)
High	49%	51%	(N=235)

$X^2 = 5.02; p < .05$

The final measure of staff attraction is a sociometric nomination question asking teachers which colleagues they like best.

> Please list the identification number of the three teachers you like the best.

Tables 37A and 37B present data regarding the relationship between these sociometric nominations and teachers' tendencies to innovate and share.

(Tables 37a and 37B here)

Table 37A demonstrates a significant association between receipt of peer liking nominations and teacher innovation. This association is by no means linear, however; it appears that teachers who receive no nominations innovate most often, and teachers who receive a medium number of nominations innovate least often. It is quite possible that some teachers feel more free to develop and practice new ideas when they are not highly involved with peers. In this respect table 37A may illustrate divergent avenues for the encouragement of innovation instead of a constant relationship across the teacher population. The association between peer liking nominations and sharing tends to be linear and positive, although it does not reach an acceptable level of statistical significance. In general, teachers who receive more peer liking choices tend to be more involved in sharing new classroom practices.

In addition to the relationships between these four dimensions of staff attraction and cohesion and professional role performance, teachers' feelings of alienation were also examined.

(Table 38 here)

The data in table 38 demonstrate consistently significant associations between alienation from school and these variables expressing the mutual

TABLE 37A

SOCIOMETRIC NOMINATIONS OF LIKING RELATED TO INNOVATION

Liking	Innovation No	 Yes	Total
	(N=140)	(N=235)	(N=375)
None	27%	73%	(N= 60)
Low	35%	65%	(N=121)
Medium	50%	50%	(N= 88)
High	36%	64%	(N=106)

$X^2 = 9.44$; $p < .05$

TABLE 37B

SOCIOMETRIC NOMINATIONS OF LIKING RELATED TO SHARING

Liking	Sharing Low	 High	Total
	(N=169)	(N=206)	(N=375)
None	54%	46%	(N= 59)
Low	50%	50%	(N=119)
Medium	42%	58%	(N= 91)
High	37%	63%	(N=106)

$X^2 = 6.74$; $p < .1 > .05$

TABLE 38

ATTRACTION DIMENSIONS AND ALIENATION FROM SCHOOL

Attraction Dimension	Alienation Low	Alienation High	Total
A. Diagram	(N=249)	(N=199)	(N=448)
One group	79%	21%	(N= 61)
Two groups	61%	39%	(N=128)
Dyads and Triads	45%	55%	(N=172)
Disintegrated	52%	48%	(N= 87)
$X^2 = 22.54; p < .01$			
B. Position	(N=227)	(N=176)	(N=403)
Center	73%	27%	(N=181)
Periphery	63%	37%	(N= 70)
Dyad or Triad	49%	51%	(N= 73)
Isolate	49%	51%	(N= 78)
$X^2 = 15.47; p < .01$			
C. Impersonal Relations	(N=258)	(N=203)	(N=461)
Low	75%	25%	(N=159)
High	46%	54%	(N=302)
$X^2 = 35.07; p < .01$			
D. Choices Received on Liking	(N=259)	(N=203)	(N=462)
None	42%	58%	(N= 79)
Low	57%	43%	(N=143)
Medium	52%	48%	(N=110)
High	67%	33%	(N=130)
$X^2 = 13.68; p < .01$			

attraction and cohesion felt by teachers in a staff. Those teachers who perceive their staff as organized in one or two large groups are significantly less alienated than those who see a pattern of many small groups or unconnected persons. Further, those teachers who see their own position as being in the midst or on the periphery of a large group are less alienated than teachers who see themselves in different positions. These two findings are operationally congruent, since in order to place oneself in the center or periphery of a large group one must have started with the selection of one or two large groups as the staff diagram. Teachers who feel that staff reflations are more impersonal are significantly more alienated from school than those teachers who feel there is high esprit de corps and friendly social interaction among colleagues. Finally, teachers who are nominated less often by their colleagues as well liked are significantly more likely to feel alienated from the school. It is clear from the various elements of this table that almost all indices of attraction are negatively and significantly related to alienation; lower alienation seems to occur among teachers who see their staff relations more attractive, personal and cohesive.

In summary, it appears that feelings of staff cohesiveness, at least as they have been measured here, are not related consistently and significantly to professional innovation and sharing. Teachers' perceptions of the map of staff social relations as well as their own positions in this diagram are not related to measures of the dependent variables. In general secondary school teachers see their staffs organized into two or more groups while elementary school teachers more often depict their staff either as organized into one large group or distintegrated into a series of isolated persons. Teachers responses to a scale assessing the degree of personal closeness among staff members is significantly related to professional sharing. The closer and more personal teachers feel staff relations are, the more likely they are to share teaching practices with one another. Teachers who are better liked by their colleagues appear to innovate more often than other teachers, and they tend to share practices more often as well. These last two measures of staff attraction do provide partial support for our expectation that attraction and cohesiveness should be related to professional role performance. Finally, there are consistently significant associations between the cluster of independent variables and alienation from school. In all respects teachers who see the staff and their roles in the staff as more cohesive, attractive and personal are less likely to be alienated from the school.

Participation in Professional Exchange

Teachers' participation in the school's informal and formal patterns of professional exchange should represent a significant avenue for gaining and sharing knowledge about professional practices. The degree to which a teacher is included in the communication system of the school may affect his own comfort in experimenting with new ideas his access to others' innovations and his utilization of staff channels for sharing his own ideas. Therefore, it is our assumption that innovation and sharing, and especially sharing, are likely to be associated with teachers' active involvement in visible professional relevant exchange roles with their colleagues. Two general categories of staff communication and exchange channels are examined in this section: (1) informal mechanisms such as peer sociometric patterns, travel arrangements and conversation foci; and (2) more formal membership roles on staff committees and educational associations. In both categories it is expected also that greater participation in staff communication and exchange activities should be negatively related to alienation from school. Teachers who play vital and active roles in this process should be less alienated than their less communicative or exchange oriented colleagues.

The first measure of informal communication channels is a staff sociometric device asking teachers which colleagues they communicate with most about teaching.

> Please list the identification number of the three teachers you communicate with most about teaching.

The proposed relationship between position in the professional communication pattern and innovation does not gain significant support from the data in table 39A. However, table 39B indicates that a significant relation between being nominated as a high communicant and sharing practices.

(Tables 39A and 39B here)

It has been suggested elsewhere that staff sociometric patterns should be more highly related to professional sharing than to innovation. This is all the more likely in the case of a communication sociometric since sharing practices requires some degree of access to staff communication channels. Innovation, on the other hand, depends less heavily on this aspect of peer relations.

In order to explore teachers' participation in another possible channel of informal professional exchange, we asked them to identify whether or not they travel to school with other teachers. The relationships between

TABLE 39A

SOCIOMETRIC COMMUNICATION NOMINATION RELATED TO INNOVATION

Communicant	Innovation No	 Yes	Total
	(N=140)	(N=235)	(N=375)
Low	37%	63%	(N=131)
Medium	42%	58%	(N=117)
High	33%	67%	(N=127)

$X^2 = 2.01$; NS

TABLE 39B

SOCIOMETRIC COMMUNICATION NOMINATION RELATED TO SHARING

Communicant	Sharing Low	 High	Total
	(N=169)	(N=206)	(N=375)
Low	55%	45%	(N=130)
Medium	51%	49%	(N=116)
High	30%	70%	(N=129)

$X^2 = 14.18$; $p < .01$

these travel arrangements and innovation and sharing are presented in Tables 40A and 40B.

(Tables 40A and 40B here)

These tables indicate that the choice of travel arrangements is significantly related to sharing but not to innovation. Sixty—four percent of the teachers who travel to school with other teachers are high in sharing, while only 49% of those who travel alone are so categorized. Teachers who travel to school with other teachers do tend to innovate more often than others who travel alone or with non-teachers, but these data are not statistically significant. In comparing these two tables it is apparent that any travelling comparison seems to promote sharing, while travel with non-teacher companions is least positively related to innovation.

Even though travel arrangements are not significantly related to innovation, they are significantly related to the source of innovations reported by teachers.

(Table 41 here)

It is clear from Table 41 that innovative teachers who travel alone to school are significantly more inventive than their colleagues who travel with other teachers. On the other hand, those innovators who travel with colleagues are evidently more likely to hear about and adapt or adopt others' practices for their own classrooms. This finding suggests that to some extent invention may be more highly related to solitary efforts, while adaptation is primarily enhanced by the sharing of innovations produced in multi-teacher associations and car pools. Further, it may be that when new ideas are shared in a car pool, peer interaction makes it unclear

TABLE 40A

TRAVEL TO SCHOOL RELATED TO INNOVATION

Travel Arrangements	Innovation No	 Yes	 Total
	(N=133)	(N=225)	(N=358)
Alone	39%	61%	(N=231)
Other teachers	31%	69%	(N=135)
Non-teachers	48%	52%	(N= 29)

$X^2 = 3.62$; NS

TABLE 40B

TRAVEL TO SCHOOL RELATED TO SHARING

Travel Arrangements	Sharing Low	 High	 Total
	(N=161)	(N=199)	(N=360)
Alone	51%	49%	(N=212)
Other teachers	36%	64%	(N=123)
Non-teachers	36%	64%	(N= 25)

$X^2 = 8.09$; $p < .05$

TABLE 41

TRAVEL TO SCHOOL RELATED TO SOURCE OF INNOVATION

Travel Arrangements	Innovation Source Adoption	 Adaptation	 Invention	 Total
	(N=64)	(N=60)	(N=65)	(N=189)
Alone	32%	27%	41%	(N=111)
Other teachers	37%	39%	24%	(N= 78)

$X^2 = 6.21; p < .05$

just whose idea it originally was, thus increasing the incidence of perceived adoptions or adaptations at the cost of solitary inventions.

Another major informal channel of professional discourse is general staff conversation about professional matters. A full series of these questons regarding teachers' daily activities was described in Chapter III. Tables 42A and 42B demonstrate that the average amount of time teachers spend each day talking about classroom practices is positively related to both innovation and sharing.

(Tables 42A and 42B here)

It should come as no surprise that the amount of time spent in informal but professionally relevant communication should be related to professional role fulfillment. It is interesting when reviewing these several aspects of the informal exchange system that only when the communication is specifically attuned to professional concerns, as in the case of talking about classroom practices, is communication relevant for innovation. Sharing, however, seems to be related as well to the more general aspects of communication and informal exchange. Moreover, while innovation may be achieved alone in the classroom but may be facilitated by certain kinds of peer exchange, sharing is achieved only as a function of the company of others.

More informal professional exchange roles are incumbent upon those staff members who serve on school committees or in extra-school educational associations. Service on school committees is significantly and positively related to sharing; sixty-four percent of those teachers who serve on school committees are highly involved in professional sharing, while only 48% of those who do not serve on such committees share to this extent ($p < .05$). However, innovation is not related to service on school

TABLE 42A

TIME SPENT TALKING ABOUT CLASSROOM PRACTICES RELATED TO INNOVATION

Average time each day	Innovation No	 Yes	Total
	(N=128)	(N=218)	(N=346)
A great deal or some	33%	67%	(N=242)
Little or none	46%	54%	(N=104)

$X^2 = 6.49$; $p < .05$

TABLE 42B

TIME SPENT TALKING ABOUT CLASSROOM PRACTICES RELATED TO SHARING

Average time each day	Sharing Low	 High	Total
	(N=160)	(N=199)	(N=359)
A great deal or some	39%	61%	(N=239)
Little or none	56%	44%	(N=120)

$X^2 = 9.17$; $p < .01$

committees, and is only slightly related to the average amount of time spent serving on school committees. The findings regarding time spent serving on school committees, a more refined measure than membership alone, are presented in Tables 43A and 43B.

(Tables 43A and 43B here)

These tables clearly indicate that sharing is positively associated with such public professional service. It may well be that these committees represent a means for public sharing of innovations in classroom practice; at the very least they help publicize the existence and maybe the professional activities of some staff members.

In a vein similar to the findings regarding arrangements for travel to school, committee service is related to interesting differences among the innovating teachers. Those innovators who do serve on staff committees tend to be slightly more adaptive, while innovative teachers spending little time serving on school committees tend to make more original inventions ($X^2 = 5.3$, df 2, $p. > .05 < .10$). It would appear that professional committee work may draw energy away from the task of making imaginative and creative inventions, but actually facilitate access to the creative work of others. It may also provide certain teachers with the concern and pride in professional growth to invest energy and time in adapting or modifying others' new ideas for use in their own classroom. In other words, when innovative teachers engage in a great deal of professional exchange activities, they are in a position to share and receive some new ideas without necessarily engaging in inventive efforts. The greatest degree of originality may most likely require some availability of time and energy apart from committees, constant conversations and heavy professional obligations.

TABLE 43A

TIME SPENT ON COMMITTEES, RELATED TO INNOVATION

Time	Innovation No	 Yes	Total
	(N=130)	(N=224)	(N=354)
Great deal	35%	66%	(N=101)
Little	38%	62%	(N=253)

$X^2 = .27$; NS

TABLE 43B

TIME SPENT ON COMMITTEES, RELATED TO SHARING

Time	Sharing Low	 High	Total
	(N=156)	(N=201)	(N=357)
Great deal	32%	68%	(N=100)
Little	48%	52%	(N=257)

$X^2 = 7.73$; $p < .01$

A second formal channel of potential professional exchange may occur in professional educational associations which draw members from several schools or school systems. Membership in, or attendance at, such associations external to the school is not significantly related to innovation or sharing;Tables 44A and table 44B demonstrates the lack of such a relationship.

(Tables 44A and 44B here)

However, such attendance does relate significantly to some distinctions within the population of innovators; Table 45 shows that attendance in educational meetings outside one's own school system is positively related to the behavioral orientation of innovative practices.

(Table 45 here)

Although the causal character of the relationship is not ascertained, it is clear that teachers using behaviorally oriented innovations are more likely to be participating in broadly based educational meetings. It may be that such meetings are a prime source for the recognition, discussion and spread of such practices. Or, it may be that teachers interested in or already using such practices seek out professional meetings that consider this orientation worthy of attention.

The examination of several variables suggests that male teachers generally are more likely than female teachers to be highly involved in the formal system of peer professional exchange. Male teachers more often spend a great deal of time on school committees than do female teachers ($X^2 = 4.40$, df 2, $p. < .05$), and they also more often attend educational meetings outside their own school system ($X^2 = 5.83$, df 2, $p. < .05$). It may well be that participation in these modes of professional communication represent a visible and potent means of upward mobility for

TABLE 44A

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS RELATED TO INNOVATION

Number of Associations	Innovation No	 Yes	Total
	(N=133)	(N=230)	(N=363)
None	28%	72%	(N= 57)
One	39%	61%	(N=163)
Two or more	38%	62%	(N=173)

X^2 = 2,24; NS

TABLE 44B

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS RELATED TO SHARING

Number of Associations	Sharing Low	 High	Total
	(N=163)	(N=198)	(N=361)
None	45%	55%	(N= 56)
One	47%	53%	(N=167)
Two or more	43%	57%	(N=138)

X^2 = .31; NS

TABLE 45

ATTENDANCE IN EDUCATIONAL MEETINGS OUTSIDE THE SCHOOL SYSTEM RELATED TO BEHAVIORAL ORIENTATION OF INNOVATION

Attendance in outside educational meetings	Behavioral Orientation of Innovation Low	Medium	High	Total
	(N=79)	(N=31)	(N=36)	(N=146)
Yes	56%	13%	31%	(N= 78)
No	52%	31%	18%	(N= 68)

$X^2 = 8.28; p < .05$

aspiring male careerists. Male teachers also are probably less tied down to family and home obligations and are more free to spend after-school or weekend hours in these professional pursuits.

Teachers' alienation from school was also expected to be related negatively to these various dimensions of professional exchange. Table 46 presents the data relevant to this concern.

(Table 46 here)

These data confirm our expectations in almost every respect. Only the report of attendance at extra-system meetings fails to demonstrate a clear relation to alienation from school. This variable, of all the ones assessed here, is least connected to local school conditions, and so is reasonably least related to the measure of local alienation. In addition, the staff-sociometric nomination of peer communicants does not relate negatively to alienation at an acceptable level of statistical significance, although a clear trend is visible. On all the other variables greater teacher participation in formal and informal channels of peer communication and exchange is associated significantly with less potent feelings of alienation from school. Teachers who feel more alienated from school more often travel to school alone, spend less time talking with colleagues about teaching practices, spend less time serving on staff committees, and are less likely to be active in professional associations.

In summary, findings regarding the relationship between participation in professional exchange and role performance clearly demonstrate that sharing is positively related to such participation. Participation

TABLE 46

PROFESSIONAL EXCHANGE DIMENSIONS AND ALIENATION FROM SCHOOL

Participation Dimension	Alienation Low	Alienation High	Total
	(N=259)	(N=203)	(N=462)
Communicant choices			
Low	52%	48%	(N=165)
Medium	53%	47%	(N=147)
High	64%	36%	(N=150)
$X^2 = 5.75; p > .05 < .1$			
	(N=215)	(N=180)	(N=395)
Travel arrangements			
Alone	49%	51%	(N=231)
With other teachers	62%	38%	(N=135)
With non-teachers	62%	38%	(N= 29)
$X^2 = 6.78; p < .05$			
	(N=240)	(N=208)	(N=448)
Time talking about practices			
Great deal or some	57%	43%	(N=303)
Little or none	46%	54%	(N=145)
$X^2 = 4.69; p < .05$			
	(N=237)	(N=106)	(N=443)
Time serving on committees			
Great deal or some	64%	36%	(N=116)
Little or none	50%	50%	(N=327)
$X^2 = 6.65; p < .01$			
	(N=252)	(N=195)	(N=447)
Membership in Professional associations			
None	43%	57%	(N= 65)
One	55%	45%	(N=215)
Two or more	64%	36%	(N=167)
$X^2 = 9.41; p < .05$			
	(N=227)	(N=214)	(N=441)
Attendance at extra-system meetings			
Yes	55%	45%	(N=237)
No	48%	52%	(N=204)
$X^2 = 2.34$; NS			

in formal school committees and organizations or involvement in informal dialogues and peer conversations may introduce problems of time expenditure that work to the detriment of innovation, but they seem to facilitate the sharing of innovative practices. The only case where exchange relationships are strongly and positively related to innovation is exchange specifically focussed on talking about professional practices. In the case of teachers' travel arrangements, it is apparent that teachers who travel to school with professional colleagues are more likely to use and modify their colleagues' ideas than those teachers who travel alone. Loners, on the other hand, are more likely to invent, or feel they invent, their own new ideas. Participation in peer exchange channels of a professional character evidently commits a teacher to a full and visible role in the development of professional activities. These active teachers have greater access to other teachers, to their colleagues' new ideas and practices, and to the power and respect probably accorded organizational facilitators. Therefore, it is reasonable that these active and visible teachers should become initiators or recipients of a greater degree of staff sharing. Most variables assessing participation in these exchange channels is significantly and negatively related to teacher alienation from school. Those teachers who are less involved in committee work and in professional associations, who are by self report and peer report less highly involved in informal staff communication patterns are more likely to feel alienated. This is especially true for those variables stressing professional dialogue and local school activities.

Summary of Interpersonal Relations

Four different aspects of teachers' interpersonal and staff relations are explored in this chapter. The character of teachers' alienation from the school is examined first and such alienation is later reviewed with respect to its relation to the independent variables investigated. Teachers' feelings of personal and group influence on local educational policy are examined, as are teachers' perceptions of staff cohesion and the degree of personal interest and liking among staff members. Finally, professional exchange mechanisms are examined, including informal travel arrangements and communication about teaching and more formal participation in staff committees and educational associations. All of these variables are considered in their relation to the professional role outcomes of innovation and sharing of teaching practices.

The sense of alienation from school felt by some teachers appears to be greater in secondary schools than in elementary schools. Alienation from the school is moreover related negatively to both innovation and sharing in secondary schools; a non-significant trend in this direction exists for elementary schools. A number of interpretations have already been offered for this phenomenon, and others are noted below.

Teachers feelings of power and influence are positively related to the sharing of professional practices. It appears that teachers who feel they wield more influence in the school organization are more likely to be involved with colleagues in professional sharing. This sense of individual potency evidently frees teachers to take professional risks with colleagues and to broaden their role definition to include both organizational participation and professional fulfillment. Individuals' sense of their own potency is positively related to their own innovation, but perceptions of colleagues' potency and colleagues' nominations of influential individuals are not so related. Teachers generally see power distributed in a hierarchical manner and consistently prefer more power for themselves, their colleagues and their principal and less for superintendents and school board members. Those staff members who feel dissatisfied with the amount of influence they have are more innovative than colleagues who are satisfied with their policy-making roles. All measures of teachers assessments of personal and staff influence are negatively related to alienation from school, and teachers who feel more potent consistently are less alienated.

Teachers' feelings of staff cohesiveness are not consistently related to innovation or sharing. With minor exceptions, the various measures of cohesiveness and attraction are not related to professional role performance. Teachers' perceptions of the opportunities for staff intimacy and close personal relations are positively related to sharing; a sense that there is a high esprit de corps or personally interested and concerned colleagues is evidently a fertile ground for the sharing of new ideas. In general, teachers who feel staff relations are more cohesive, inclusive and personally supportive and attractive are less alienated from the school.

The degree of teachers' participation in a variety of forms of professional exchange systems does appear to be related positively to the sharing of teaching practices. With regard to relatively informal channels, the receipt of colleagues' nominations on a communication sociometric, travelling to school with other teachers and spending substantial time talking about professional practices are all positively related to sharing.

Teachers who participate highly in the more formal channels of exchange such as committee membership and attendance at educational association meetings also are more often involved in the sharing of practices. In all cases where participation is negatively related to alienation from school,those teachers who have access to, and generate greater professional communication with, colleagues are much less alienated than their participatory peers.

Although the only dimension of peer communication and exchange that is significantly related to innovation is time spent talking about practices, other variables seem related to important differences within the population of innovating teachers. Innovative teachers who travel to school alone are more likely to invent their new practices, while teachers who travel in the company of peers are more likely to adapt and adopt others' innovative practices. There is also a tendency for innovating teachers who spend a great deal of time on staff committees to be more likely to adapt innovations, while innovators who spend less time on such committees tend to utilize more original practices. In this respect it would appear that freedom from role obligations and peer dialogue, and the consequent separation from the interchange of standards and practices among peers, leads either to more original inventions or to teachers' perceptions of greater originality. Substantial involvement in peer exchange seems to be more highly associated with the innovation of practices that are seen to have their source partly in the work of colleagues. Further, teachers who attend cross-system meetings of professional associations are more likely to report innovations that are highly behavioral in orientation then are their more systembound peers. Perhaps the meetings are the media through which progressive educators interpret the latest scientific findings and influence the classroom efforts of teachers.

Throughout this chapter important differences between the interpersonal conditions of life in elementary and secondary schools continue to occur. It has been reported that secondary school teachers more often feel alienated from school and data on staff interpersonal relations may help clarify this phenomenon. One source of greater teacher alienation in secondary schools may be reflected in the findings that secondary teachers perceive their colleagues as having less influence than do teachers in elementary schools. Moreover, secondary school teachers more often describe their staff in terms of two or more groups; on the other hand elementary school teachers more often describe their staff either as a single group or as a series of unconnected individuals. These aspects of organizational life may serve to illustrate a powerlessness and fragmentation in staff relations in secondary schools that confirm some speculations made in earlier chapters. We expect that the organizational level of analysis utilized in much of Chapters V and VI will extend our understanding of these differences.

CHAPTER V

THE SCHOOL CLIMATE: THE ORGANIZATION AS A UNIT

Scholars concerned with different aspects of the teaching-learning process are increasingly aware that teachers' professional performances are not dependent solely on their individual qualifications or the character of their interpersonal relations. In spite of the fact that individual differences and peer interpersonal relations constitute relevant and important variables in the study of human performance, there is ample evidence that some persons do not seem to be able to function efficiently under certain organizational circumstances, and others show great improvement when challenged with a different social climate. In a recent review of the sociological literature regarding the school as a formal organization, Bidwell commented that a systematic study of the school as an organization had yet to be made (1965). Furthermore, the research literature that does exist regarding some subsystems of the school organization is fragmentary and discontinuous. There have been few attempts to abstract from such empirical findings certain generic attributes of the school as an organization. Most empirical and descriptive studies focus on classrooms and neglect the other subsystems in which teachers are involved.

This chapter undertakes to inquire into the ways the school organizational climate influences some aspects of teachers' professional role performance. Organizational climate is used to refer to those systemic aspects and products of the ways members relate to the school as a social unit. Halpin and Croft have constructed what is called an "Organizational Climate Description Questionnaire," which allows them to characterize the organizational climate as the "personality" of a school (1963). They then analyzed the climate of seventy-one elementary schools and were able to identify a variety of organizational climates which could be ranked on a continuum defined at one end as open and at the other as closed. By open and closed they mean essentially the degree of functional flexibility or rigidity in the system's adjustment to internal and external stress. Halpin and Croft limit their use of organizational climate to teacher-principal relations; we hope to broaden that notion with the investigation of peer relations and structures.

The Measurement of Organizational Variables

In considering some of the extra-individual variables that seem to be relevant to an understanding of professional role behavior, teachers' perceptions and feelings about the character of their school are organized into several common themes, and these themes are related to the degree of innovation and sharing among staff members in a school. Through various instruments teachers have been asked to stipulate how they characterize and interpret the social structure and norms of their own school, whether that characterization is acceptable or highly valued by them, and we have reviewed to what extent it is shared by their colleagues.

Several different variables are derived from the sociometric data. Some of these data have already been reported as attributes of persons; but in this chapter they are utilized as systemic characteristics. The degree of variance of the sociometric choice system can be analyzed, providing a picture of the extent to which some teachers receive many choices and some few, or whether the choices are distributed so that many teachers receive some choices of each. This school index records the degree of centrality or diffusiveness of shared power, shared communication and shared liking choices throughout a staff. In addition to the variance of this choice system, a school can be characterized by the degree of overlap among the sociometric nomination patterns. For instance, in some schools the same teachers may be selected as the high communicants and high influencers; in other schools they may not. An analysis of this interrelatedness can be made by computing the degree of correlation among the several sociometric dimensions. Another analytic dimension can be retreived from the sociometric questions by coding and assessing the degree of mutuality or reciprocality in choices. To what extent do teachers who are nominated by a colleague as a communicant nominate that colleague as one of their communicants in return. Which schools are characterized by a large number of mutual choices and which seem to have many nonreciprocal patterns?

The range of issues that are investigated through various analyses of these sociometric choice patterns, then, include the following:

Sociometric choice patterns

Variance

1. Communication
2. Liking
3. Influence

Correlations

1. Communication and Liking
2. Communication and Influence
3. Liking and Influence

Mutuality

1. Liking
2. Communication

It is our expectation that greater diffuseness or choice patterns, greater intercorrelations of sociometric dimensions and greater mutuality in sociometric nominations should be associated with a greater degree of staff innovation and sharing. In more diffusely structured schools more teachers are involved in the various sociometric networks, thereby increasing everyone's access to conversation, influence and support. If, in addition, teachers who are more influential are also more central to communication channels and are well liked there is likely to be greater stability and cohesiveness in the staff. Finally, to the extent that positive links and relations are reciprocal and not merely one way, a staff is more tightly involved and integrated. All of these conditions should facilitate the innovation of classroom practices, and especially the sharing of these practices in a staff.

In some cases individual teacher's attitudes and orientations can be combined to provide a useful picture of staff wide concerns. One form for accomplishing this is to organize and tabulate individual preferences to produce a mean score for an entire staff. Attitudes regarding ideal and actual political conditions at school as well as the degree to which teachers feel that there are demands upon them to conform to certain organizational norms and procedures are assessed in this fashion.

Staff Attitudes Regarding the School Organization

1. Feelings of influence
2. Discrepancy between actual and desired personal influence
3. Perceptions of school demands for conformity.

It is our expectation that in schools where teachers feel more potent, where they feel there is less of a discrepancy between actual and preferred influence arrangements, and where they see relatively minimal demands for professional conformity there will be more staff innovation and sharing.

A different method of analyzing schools' organizational climates focuses upon the degree of staff consensus or dissensus with regard to certain interpersonal and organizational perceptions and attitudes. In this regard, some of the individual attributes discussed in Chapters III and IV are organized into a common statement reflecting staff agreement or disagreement on responses to the following variables:

Teachers' Consensus and Dissensus

1. Staff social diagram
2. School's educational orientation
3. School demands for conformity

It is our expectation that a high degree of staff agreement on such issues will be associated with greater staff innovation and sharing. As long as the staff norms and rules are clear people may be able to be creative within them, but unclear standards may produce a degree of uncertainty that is paralytic and inhibits creativity and experimentation.

Finally, as the focus in this chapter shifts from the individual level of analysis utilized in the preceeding chapters, to the organizational level of analysis, the measures and the character of the dependent variables also change. The major dependent variables are assessed by computing the percentage of teachers in each school who answered the question regarding their own teaching by reporting that they have innovated, and the mean score of teachers in each school on the sharing index. The percentage and rank of each school on these two measures is shown in Table 47.

(Table 47 here)

TABLE 47

STAFF PERCENTAGES AND MEANS AND SCHOOL RANKS ON INNOVATION AND SHARING

School	Percent of Staff Innovation (Yes-No)	School Rank on Innovation	Mean Score on Staff Sharing	School Rank on Sharing
01	69	15	3.13	14
02	36	1	1.08	1
03	56	6	2.64	7
04	60	7.5	2.54	6
05	63	11.5	3.37	16
06	61	9	4.09	18
07	46	3	2.18	4
08	83	20	4.80	21
09	63	11.5	2.50	5
10	60	7.5	1.43	2
11	62	10	4.55	19
12	67	13.5	2.80	8
13	54	4	2.88	10
14	75	18	4.66	20
15	89	21	2.89	11
16	67	13.5	3.36	15
17	70	16	2.15	3
18	76	19	3.42	17
19	55	5	3.00	13
20	73	17	2.92	12
21	38	2	2.83	9

The percentage of staff innovation in a school varies from a low of 36% to a high of 89%. Only three schools show an innovation index, thus computed, of 50% or less, with more than 50% of the teachers innovating in the remaining eighteen schools. The median and mean innovation index for this sample of schools is 63%; the standard deviation is 13.2%. If the innovation percentages are computed on the basis of all teachers on the staff, even those who did not answer the self-report innovation question, the range extends from 21% to 86%. The median in this case drops to 56%, the mean is reduced to 51%, and the standard deviation increases to 17.2%. There are some findings and tables in this chapter where the total population of teachers in a school is reported regardless of whether teacher self-report response was "yes," "no," or "no response." This is largely the case in the examination of the sociometric nominations, which permit teachers to choose nominees from the total school population and necessitates the same procedures for deriving a school measure of innovativeness. In no case where this procedure is followed, it is noted, does the use of "no" or "no response" change the results in any table.

It was noted earlier that each teacher received a sharing score which ranged from a low of 1 to a high of 7. The mean of teachers' scores is computed for school and is used as the index of sharing in that school. This staff index for this sample of schools ranges from 1.08 to 4.80. The median score is 2.89, the mean is 3.01, and the standard deviation is .96.

The rankings of all schools on these measures of innovation and sharing were correlated to give some indication of their relation to one another and the Spearman rho-correlation between school innovation and sharing is +.52 and is statistically significant (p.< .01). This relationship between school indices parallels the relationship between these two variables at the individual level of analysis.

For each school an alienation score was computed by taking the mean of individual teachers' responses to the scale measuring alienation from school. These school scores range from a low of 1.05 to a high of 1.80. The median school alienation score is 1.27, the mean is 1.29 and the standard deviation is .21. Neither innovation nor sharing, however, is related significantly to alienation on a school level. The Spearman rho correlation between school alienation and innovation is -.31 (NS) and between school alienation and sharing is +.12 (NS). Since the majority of these schools (fifteen out of twenty-one) are elementary schools, it may be that they overbalance the scales and confirm the parallel finding reported in Chapter IV, wherein alienation is not related to either of the two dependent variables in elementary schools.

The large ranges and standard deviations of these indices of innovation and sharing, combined with the facts of a relatively small sample of twenty-one schools, suggest it will be difficult to discover statistically significant findings for these variables at the organizational level of analysis. In comparing schools in the following tables principal use is made of the Mann-Whitney test. Hayes considers this a "powerful alternative to the usual T—test," and especially useful when some of the assumptions for the latter are not met (1963, p.633). It is particularly appropriate here because a normal distribution of the main dependent variables in these twenty-one schools does not exist.

Sociometric Choice Patterns

The technique for creating a continuum of diffuseness-centrality for sociometric choice distribuions was used by Schmuck (1962). He refers to a central structure as a situation where the members of an organization agree in selecting a small number of colleagues as the ones whom they like most, communicate to most, or see as most influential. In other words, relatively few members are highly or often selected, and many others are neglected or mentioned by only one colleague. He refers to a diffuse structure, on the other hand, as a situation where a large number of colleagues are selected as being liked, communicated to, or influential. In other words, there is a wide focus of popularity or influence whereby most members receive some nominations and very few are neglected. In adapting Schmuck's classroom sociometric measures to the present study of school staffs, the centrality or diffuseness of a structure is determined by the computation of staff variance in the number of "choices received" on each sociometric dimension. The centrality of a sociometric structure increases as the variability or variance of choices received increases. A low variability or variance of this distribution characterizes a peer sociometric structure approaching greater diffuseness. The most diffuse structure would result if every teacher received the same number of choices on a given nomination dimension: the variance would be zero and the finding would suggest that all staff members are about as influential, well liked or communicated with as are all others.

Diffuse sociometric patterns of communication, attraction and influence are more likely to contribute to the innovation and sharing of educational practices than are central patterns. The principle reason for this expectation is that in an organization characterized by widely distributed interaction preferences it is more likely that information about new ideas is widely shared. Furthermore, such a distribution locates multiple sources of expertise, power and support, suggesting that almost all colleagues can find or provide professional leadership for one another. For much the same reasons it is also expected that more central patterns are more likely to be positively associated with a staff's feeling of greater alienation from the school than are diffuse patterns.

In the following table, the entire sample of twenty-one schools is divided into those having more diffuse sociometric structures and those having more central structures on the basis of the amount of variance or spread of nominations for each school.

(Table 48 here)

The data in this table do not confirm the expectations suggested above. None of the relationships are statistically significant, although there does appear to be some minor trend for schools with more diffuse liking and influence patterns to have more innovation and more sharing. Schools with more central influence patterns also have significantly higher staff alienation scores ($p. < .05$) than more diffusely structured schools. The character of communication and liking patterns is not related to alienation.

Another means of assessing the school organizational climate is through an analysis of the relationship among various sociometric patterns and relations. In schools where there is a significant correlation between the communication and attraction sociometrics, interpersonal relations are more likely to be informal and friendly, because teachers tend to communicate with those they like most. On the other hand, in schools where there is a nonsignificant correlation between communication and attraction, the school organizational climate is more likely to be

TABLE 48

CENTRALITY-DIFFUSENESS OF SOCIOMETRIC PATTERNS RELATED TO STAFF INNOVATION AND SHARING

Sociometric	(N)	Staff Innovation*	Staff Sharing
A. Communication			
Diffuse pattern	(12)	51.7%	3.00
Central pattern	(9)	50.7%	3.03
		U=52; NS	U=52; NS
B. Attraction			
Diffuse pattern	(9)	56.8%	3.15
Central pattern	(12)	47.2%	2.91
		U=38; NS	U=53; NS
C. Influence			
Diffuse pattern	(11)	54.4%	3.17
Central pattern	(10)	47.8%	2.94
		U=46; NS	U=52; NS

*In this table school innovation figures are computed on the basis of all teachers in a school, regardless of whether or not they answered the innovation question. $(\text{Innovation} = \frac{\text{Yes}}{\text{Yes + No + NA}})$

formal and neutral if not antagonistic. In the latter type of staff, teachers are no more likely to communicate with people who they do like than with those who they do not especially like. It is expected that there will be more staff innovation and sharing in schools characterized by the friendly and informal relations manifest in a high association between these sociometric dimensions. A significant correlation between communication and influence sociometric dimensions probably reflects a pattern in which teachers tend to communicate with those colleagues they consider to be influential. Since influential teachers tend to innovate and share more, one might expect that in schools where teachers talk with influential persons there will be more innovation and sharing than in schools without such congruence. Similarly, in those schools where there is a significant correlation between attraction and influence, the organizational climate can be seen as one where likable teachers are the influential ones contrasted with a climate where the popular teachers are not the ones who are influential. It is our expectation that a correlation of both power and liking relationships should facilitate greater staff innovation and sharing. When these different dimensions of staff interaction are highly related to one another there should also be a lesser extent of staff alienation from school. As a function of bureaucratic rigidity or organizational uncertainty alienation should be decreased by the coherence and unification of these various peer patterns of attraction, influence and communication.

The data examining these propositions are presented in Table 49.

(Table 49 here)

In each of these pairs of variables, the percent of staff innovation is virtually the same in the schools where the sociometrics are correlated

TABLE 49

CORRELATION OF SOCIOMETRIC PATTERNS RELATED TO INNOVATION AND SHARING

Variables and Correlations	(N)	Staff Innovation	Staff Sharing
A. Communication-Attraction			
Correlated	(14)	51.8%	3.02
Uncorrelated	(7)	50.3%	2.99
		U=46; NS	U=43; NS
B. Communication-Influence			
Correlated	(12)	52.6%	3.12
Uncorrelated	(9)	49.5%	2.86
		U=53; NS	U=49; NS
C. Attraction-Influence			
Correlated	(8)	50.3%	3.13
Uncorrelated	(13)	51.9%	2.93
		U=48; NS	U=42; NS

*In this table school innovation figures are computed on the basis of all teachers in a school, regardless of whether or not they answered the innovation question. (Innovation = $\frac{\text{Yes}}{\text{Yes + No + NA}}$)

as in the schools where they are uncorrelated. With regard to staff sharing, the results are also nonsignificant, although schools in which the influence and communication or influence and attraction sociometrics are highly correlated do tend to have slightly more staff sharing. There are no meaningful differences or trends for these variables with regard to staff alienation from school.

With regard to the third means of sociometric analysis, it is expected that an organizational climate characterized by reciprocity or mutuality in staff attraction and communication patterns is conducive to a sense of staff solidarity and supportiveness. In such schools it is expected that there would be more staff innovation and particularly sharing of ideas relevant to the teaching-learning process. Moreover, such mutuality should decrease staff alienation from school.

(Table 50)

The data in Table 50 do not significantly confirm these expectations as statistically significant. However, there seems to be a trend in the predicted directions, with schools in which greater mutuality in communication or attraction exists manifesting more staff innovation and sharing. Staff mutuality of communication choices does tend to be negatively related to staff alienation from school ($p < .10 > .05$).

In summary, these analyses do not result in the discovery of powerful associations between diffuseness-centrality, correlation or mutuality of sociometric structures and staff innovation and sharing or alienation from school. Some trends in the expected direction do appear, but they do not reach acceptable levels of statistical significance and cannot be considered as confirming evidence.

TABLE 50

MUTUALITY IN ATTRACTION AND COMMUNICATION CHOICES RELATED TO INNOVATION AND SHARING

Mutuality	(N)	Staff Innovation	Staff Sharing
A. Communication			
Mutual	(9)	66.9%	3.19
Non-mutual	(12)	60.1%	2.88
		U=41; NS	U=47; NS
B. Attraction			
Mutual	(9)	69.2%	3.20
Non-mutual	(12)	58.3%	2.87
		U=32; p<.10 >.05	U=47; NS

Staff Attitudes Regarding Organizational Climate

In this section scores on certain relevant individual variables have been combined to form a staff mean; this mean is then related to staff innovation and sharing. In Chapter IV it was demonstrated that individual feelings of influence on local educational policy is significantly and positively associated with individual innovation and sharing. Similarly, individual feelings of a discrepancy between actual and desired influence was significantly and negatively related to these variables; teachers who felt a greater discrepancy innovated and shared less than their peers who were more satisfied with the distribution of influence in their schools. These individual variables are here raised to an organizational level of analysis, taking the means of individual scores within each school as a series of staff measures.

A staff should be less likely to innovate and share teaching practices in those organizations where it feels it is less able to influence the basic structures and processes within which it operates and where there is a greater discrepancy between what a staff sees and prefers to be its influence. Moreover in such organizations a teaching staff is likely to be more alienated from school. Tables 51 and 52 present data relevant to these expectations.

(Tables 51 and 52 here)

Table 51 suggests that there tends to be slightly more staff innovation in schools where the staff as a whole feels it has greater personal influence on school policy. However, this association does not reach an acceptable level of statistical significance. Moreover, there is no meaningful difference on this variable with regard to the degree of staff sharing.

TABLE 51

STAFF MEANS OF TEACHERS PERCEIVED INFLUENCE RELATED TO STAFF INNOVATION AND SHARING

Staff Personal Influence	(N)	Staff Innovation	Staff Sharing
High	(9)	68.4%	3.08
Low	(12)	58.9%	2.96
		U=27; $p < .10 > .05$	U=43; NS

TABLE 52

SCHOOL DISCREPANCY BETWEEN TEACHERS PERCEIVED AND DESIRED PERSONAL INFLUENCE RELATED TO INNOVATION AND SHARING

Discrepancy	(N)	Staff Innovation	Staff Sharing
High	(11)	56.2%	2.67
Low	(10)	70.5%	3.38
		U=21; $p < .05$	U=28; $p < .05$

In Table 52 it is clear that when a staff has minimal feelings of discrepancy between actual and desired influence arrangements in the school, there is likely to be more staff innovation and sharing of professional practices. Both dependent variables manifest statistically significant associations in this regard. Neither a staff's feelings of personal influence or discrepancy about influence is significantly related to alienation from school.

The third measure of common staff attitudes used here is based upon teachers' perceptions of the school's demands upon them to conform to certain professional standards. All social organizations establish norms and rules that solicit member conformity; some of these grow out of supervisory regulations while others are more vaguely located in the "system" or in the pattern of peer relations. In this study, the latter form of felt demands for conformity is defined in terms of staff feelings that there is: (a) a general expectation that teachers should adjust to the school system rather than change it; and (b) a perception of a general tone of discouragement of dissent. Teachers were asked to indicate to what extent the following statements characterize the professional climate of their school.

1. Teachers are expected to adjust to the school system rather than change it.
2. Teachers can achieve their educational goals only if they "fit in" as persons.
3. Teachers have ideas about the school which they don't express in public.
4. Teachers who don't " fit in" are rejected.
5. There are pressures on teachers not to deal with controversial matters.

The scale of demand for conformity is derived from these items in the same way as earlier scales of alienation; then individual teachers scores are combined to produce a staff mean. It is expected that the more a staff feels that the climate in a school demands conformity to established procedures, the less that staff will innovate and share new or unusual professional practices and the more it will be alienated from the school system.

Data relevant to the relationship between these perceived demands and staff innovation and sharing are presented in Table 53.

(Table 53 here)

This table demonstrates that a staff's perception of systemic demands to conform are negatively and significantly related to innovation. Those schools where staffs see fewer or lesser demands for conformity have more professional innovation. Although other data in the table are not quite statistically significant, a similar trend is apparent with regard to staff sharing. These data tend to support the notion that high conformity expectations or demands inhibit a staff's willingness to experiment with new ideas and may constrain the discussion of such ideas with colleagues. There is also a significantly positive relation between staff feelings of a high demand for conformity and staff alienation ($p > .05$). This finding is consistent with our expectations and with organizational literature discussing the relationship between bureaucratic demands for conformity and member feelings of dissatisfaction and non-involvement.

In summary, it appears that these measures of the central tendencies of staff attitudes are related to school measures of innovation. Staff

TABLE 53

STAFF MEANS OF PERCEIVED DEMAND FOR CONFORMITY RELATED TO STAFF INNOVATION AND SHARING

Demand for Conformity	(N)	Staff Innovation	Staff Sharing
Low	(12)	67.5%	3.30
High	(9)	57.0%	2.63
		U=26;p >.05	U=32;p> .10 <.05

perceptions of greater influence, of relatively low discrepancy between perceptions and preferences in this matter and of less stringent demands for professional conformity are all positively associated with staff innovation. Indices of staff sharing are significantly associated only with a minimal discrepancy regarding influence, and are not related significantly to the other variables. Staff alienation from school is positively and significantly associated with perceived demands for conformity, strongly suggesting that such standards and requirements not only depress creativity but inhibit the building of strong staff commitments and loyalties. This finding is also congruent with earlier concerns regarding the necessity for some degree of professional autonomy consistent with a staff commitment to full professional role development.

Staff Consensus and Dissensus

One important strategy for inquiring into the organizational climate of a social system is to assess the degree to which a staff agrees on important aspects of their social system. Certainly the staff's range or central tendency on key variables is critical, but staff agreement or disagreement as such should also be important. An organization whose members agree on various conditions and aspects of the climate within which they operate is likely to be different from another organization whose members do not seem to be able to reach a consensus on what kind of a climate surrounds them. A high degree of consensus might be an index or manifestation of the existence of clarity about well-established norms or regularity about channels of interaction. Such clarity should make it easier for each teacher to know where he stands and thereby should promote professional innovation and sharing and decrease alienation among the entire staff.

All members of the staffs in the schools under study were asked to indicate their perceptions of various aspects of school life including the school's objectives and goals and its organizational character. Then staffs which respond with a high degree of agreement or consensus are compared to those less agreement or more dissensus.

Responses to the diagram of staff social relationships represent one effort in this direction. The data relating the degree of staff agreement upon the diagrams selected to school level dependent variables is presented in Table 54.

(Table 54 here)

These data indicate that a staffs degree of agreement on the selection of a school diagram is significantly and positively related to staff sharing, but not to innovation. There is no apparent association between the level of staff consensus on this variable and staff alienation from school.

A second variable which seems relevant in this regard is the staff's educational objectives. To the extent that a staff can agree upon certain objectives they should share professional perspectives and be able to collaborate more effectively. Data in this regard are presented in Table 55.

(Table 55 here)

Table 55 suggests a trend that is in direct disagreement with the above expectations. Staffs where there is a low degree of agreement on educational objectives tend to innovate and share more than staffs with a high degree of agreement. It is possible that substantial agreement on attitudinal or ideological perspectives such as these may act as a constraint on the development of new and different ideas. In a sense, a healthy degree of philosophical pluralism may be the optimal professional climate for

TABLE 54

AGREEMENT ON STAFF DIAGRAM RELATED TO STAFF INNOVATION AND SHARING

Degree of Agreement on Staff Diagram	(N)	Staff Innovation	Staff Sharing
High agreement	(10)	63.2%	3.40
Low agreement	(11)	62.8%	2.65
		U=49; NS	U=31; $p > .05$

TABLE 55

AGREEMENT ON SCHOOL OBJECTIVES RELATED TO STAFF INNOVATION AND SHARING

Degree of Agreement on Objective	(N)	Staff Innovation	Staff Sharing
High agreement	(11)	59.4%	2.67
Low agreement	(10)	67.0%	3.33
		U=38; NS	U=31; $p > .10 < .05$

inventive thinking and acting. Staff alienation from school, however, demonstrates a minor but negative association with degree of consensus on objectives; staffs with a low degree of agreement show more alienation (p.$<.05>.1$). This finding is consistent with expectations regarding the socially disentegrative effects of philosophical divergency in a staff.

In the previous section of this chapter it is reported that staff perceptions of school demands for conformity are negatively related to staff innovation. In Table 56 the degree of staff agreement upon perceived school demands for conformity are related to organizational innovation and sharing.

(Table 56 here)

The trend of the data in this table suggest that the higher the degree of staff agreement on how severe or relaxed the professional conformity pressures are in a school, the more staff innovation there is. Since perceived demands for a great deal of conformity is shown in Table 53 to be negatively related to innovation the finding here can be interpreted in two ways: (1) high agreement is in fact agreement on low demands for conformity; or (2) high agreement means substantial public knowledge that these are demands for conformity, and this knowledge frees teachers to identify its sources, to attempt to get around it, and to innovate despite it. There are no associations between the degree of staff agreement on this variable and professional sharing or alienation from school.

In summary, it appears that degree of staff agreement on the character of the organization is occasionally but not consistently related to professional innovation and sharing. Agreement on the diagram of staff social relations is positively related to staff sharing, and agreement on

TABLE 56

AGREEMENT ON DEMANDS FOR CONFORMITY RELATED TO STAFF INNOVATIONS AND SHARING

Degree of Agreement on Demands	(N)	Staff Innovation	Staff Sharing
High Agreement	(11)	67.6%	3.22
Low Agreement	(10)	57.9%	2.78
		U=29;p >.10 < .05	U=47; NS

perceived demands for conformity tends to be related to innovation. But a high degree of staff agreement on school objectives tends to be negatively related to innovation and sharing. It would seem that in this section too few relations are statistically significant, and those that are significant are not consistent enough to permit any very confident interpretation of the findings.

Summary of the Organizational Climate

Three different ways of inquiring into a school's organizational climate are explored in this chapter. In general, the attempt is to proceed at an organizational level of analysis by using variables that go beyond individual responses and preferences. These organizational measures include various aspects of the staffs' sociometric choice patterns, such as the variance and reciprocality of choices received and the correlation between different choice dimensions. Further, they include the computation of staff means of individual teacher attitudes regarding actual and desired influence on school matters and perceived demands for professional and social conformity. Finally, assessments are made of the degree of consensus in a staff regarding the character of peer relations,educational orientations and demands for conformity that exist in a school. All of these variables are considered with respect to their association with dependent variable measures of the percent of teachers in a school who innovate and the mean level of teacher sharing in a school. In addition, an index of staff alienation for each school is computed by taking the mean of individual teachers' scores on that alienation scale described earlier.

The various manipulations of sociometric data do not result in consistently significant findings regarding their relation to staff alienation or professional innovation and sharing. In most cases, however, there are slight trends to the data that support the expectations that greater diffuseness, greater mutuality or reciprocity and greater interrelatedness of choice patterns are related positively to staff innovation and sharing and related negatively to staff alienation from school. But their trends are not statistically significant and cannot be considered as more than suggestive.

The measures of staffs' central tendencies more often exhibit significant associations with the dependent variables, but these findings are not general and inclusive. Staff feelings of personal influence on local policy-making, for instance, are not related significantly to innovation and sharing. However, the existence of a discrepancy between actual and preferred influence is significantly related to both dependent variables: staffs manifesting more minimal discrepancies engage in more professional innovation and sharing. Neither of these two concerns about power or influence is related to a staff's sense of alienation. The third central tendency measure, a staff's perception of a high demand for professional and social conformity, is negatively related to staff innovation and positively related to alienation from school.

The degree to which staff members agree upon the character of certain school variables is the third method used to assess the climate of an educational organization. Staffs with a higher degree of teacher agreement on the map best representing their staff relations, engage in more sharing than do staffs with less agreement. Moreover, staffs with greater consensus on their perceptions of organizational demands for conformity engage in more professional innovation and sharing than staffs with less consensus on this variable. It seems that teacher agreement on the character of their social and professional environment may permit them to utilize these environs to their advantage. Where the school environment is not perceived clearly, or is not perceived in common, it may be more difficult for a staff to collaborate in any mutual endeavor and/or to support members' innovative pursuits.

It is clear that expected associations among these variables considered at the organizational level of analysis are not consistently confirmed. Part of the explanation for these results may lie in some of the methods used here. For instance, it may be quite inadequate to characterize an organizational unit by summing or averaging the attitude scale responses of all the members of the organization. The organization is more than that, it is also an ongoing set of rules of behavior traditions, norms and goals. It is also probable that some of the non-significant findings and trends are a function of the relative homogeneity of the schools in this sample. Despite original hopes for a broad sample, these relatively traditional middle-class and lower-middle class school systems place staff members in similar roles in fairly similar buildings. It may well be that there are limited organizational dimensions upon which these schools differ very greatly. If this is the case, not only may the variables used here inadequately tap the organizational qualities of these schools, but they may also survey a relatively prescribed and perhaps inappropriate range of dimensions of relatively alike organizations. Although a sample of 499 teachers is large enough to permit a broad range of responses, the sample of organizational units is only 21, and it may be that a number of non-significant trends and minor relations would have become more significant with a larger as well as more diverse sample.

There are several circumstances in which the independent variable responses are highly skewed, showing little response variation across different staffs. In this connection may lie a potential explanation to the most perplexing question of all: why do certain variables related to individual teacher innovation fail to relate to organizational innovation? In several cases it appears that there is greater response variation within schools than among schools. For instance, consider the variable of teacher influence on the curriculum: Table 57 presents the mean and variance scores within all 21 schools on this variable. The difference between the smallest mean (1.73) and the largest mean (2.40) is only .67, a very small range. Moreover, the variance between school's means is only .17. Eleven of the schools have a within-school variance greater than the range, and all the schools have within-school variances greater than the between-schools variance.

(Table 57 here)

A similar pattern emerges with respect to other of the independent variables examined in this chapter. In order for this organizational analysis to be meaningful, a pattern would have had to emerge within each school, and some different patterns emerge in different schools. In other words, we had hoped for a relatively small variance within schools and a relatively large variance between schools; the reverse occurred far too often. Obviously we could not expect that the school mean would vary along the entire response range, but we did hope for more differences than occurred.

TABLE 57

STAFF MEAN AND VARIANCE SCORES FOR TEACHER INFLUENCE ON THE CURRICULUM

School	Mean	Variance
01	2.05	.72
02	1.82	.51
03	1.79	.67
04	2.00	.52
05	2.12	.63
06	2.00	.63
07	2.08	.86
08	1.83	.69
09	2.00	.78
10	1.89	.72
11	2.00	.60
12	1.78	.79
13	1.73	.75
14	2.19	.66
15	2.09	.67
16	1.80	.75
17	2.40	.74
18	2.05	.72
19	2.00	.73
20	2.05	.38
21	1.79	.67

In summary, there seem to be three general explanations for the number of non-significant findings reported in this chapter, and they are not mutually exclusive: (1) inappropriate variables and/or measures were selected to survey the organizational climate; (2) organizational variables of the type and complexity reviewed here do not have a consistent association with degrees of staff innovation and sharing; (3) the schools in this sample are too few and too alike to provide enough of a range; the schools are more alike than different on these variables and the teachers in these schools are more different than alike.

CHAPTER VI

TEACHER - PRINCIPAL RELATIONS

The principal is the formal and legitimately designated leader of professional activities in the local school organization. As such, he has a wide range of responsibilities including: encouraging and maintaining high standards of student performance; recruiting and directing effective administrative personnel and services; building collaborative relations with colleagues in other buildings and administrative offices; establishing liaison and leadership roles with school-community organizations and relations; performing professional educational activities with his teaching staff; and providing and maintaining supportive and productive relations among the teachers in his staff. In different schools principals give different priorities to one or another of these general role responsibilities. Since our focus in this study is upon peer and organizational structures associated with teachers' full professional role performance, we are particularly concerned with the last two principal role alternatives.

Teachers' perceptions and attitudes regarding their principal's role behavior are likely to affect their perception of his priorities or his commitment to their interests and concerns. In addition, teachers' views of the principal's actual influence ability -- his ability to make his views and ideas felt both inside and outside of the school are likely to affect their reaction and relation to him in school. In turn, these feelings about school leadership patterns can be expected to influence teachers' own professional role behavior. Despite the importance of teachers' views of principals, the dynamics of staff - principal interaction are certainly reciprocal. The way principals view their teachers is important, and the interaction among these mutual perceptions is also critical. The extent to which the principal's own goals and those of his staff are congruent, for instance, should affect the degree to which they can work together, and the freedom teachers feel to trust and rely upon the principal. Throughout this chapter we will continue to focus upon the organizational and personal relevance of these issues for the dependent indices of teachers' professional innovation and sharing and their sense of alienation from school.

Teachers who view their principal as behaving in a way that encourages an open and professionally productive atmosphere should be more likely to innovate and share teaching practices than their colleagues who see the principal as closed to them or as non-supportive of their growth concerns. Moreover, teachers with the latter cluster of views are more likely to be alienated from the school. Principals who are seen as having power or influence upwards in the school system, i.e., principals who are seen as able to represent and exert influence in their teachers' interests should be more likely to have staffs who are highly involved in life at the school and who engage in greater amounts of professional innovation and sharing. Principals who exert minimal influence internally, i.e., who guarantee staff autonomy by not strongly persuading or coercing teachers, are more likely to encourage greater professional role behavior. The categories of principal behaviors that are relevant to these concerns are spelled out below.

Staff views of the principal

Principal's role behavior:

1. Support for professional development
2. Personal relations
3. Shared decision-making power with staff
4. Accessibility
5. Closeness of supervision

Principal's upwards and downwards influence

In addition to staff views of the principal, the principal's own background and orientation are likely to have some effect on staff patterns of innovation and sharing. Although these personal attributes and priorities are not likely to have very powerful effects on staff behavior they do seem appropriate to categorize and test. The reason for our expectation of minimal effect in this regard is that the most powerful variables seem to be the teachers' own phenomonology - their perceptions and/or interpretations of a principal's commitments and behaviors, not his self report. Nevertheless, in an attempt to test this proposition, and moreover to get some general view of what these principals seem to be like from their own point of view, the following personal dimensions are reviewed.

Principal background and orientations

1. Educational priorities and objectives
2. Professional role definition
3. Perceptions and preferences regarding his own influence

The principal and his staff of teachers exist together in the school, and for better or worse they must relate to one another. The more they can share perceptions and interpretations of the purposes and structures in which they are engaged the better they should be able to collaborate in meeting each other's needs and goals. In order to review this potentiality we asked principals to respond to a number of the same questions that were posed to teachers. In other areas, we asked principals to estimate the way(s) that their staff would respond to certain questions. As a result, there are several indices of principal-staff mutuality or congruence as follows:

Principal-staff congruence

1. Staff sociometric leaders
2. Professional innovators
3. Ways teachers spend their time daily
4. School priorities and objectives

In 21 different schools there must be almost as many different principal styles and as many patterns of principal staff collaboration or interaction and mutual adjustment. In terms of the large number of negative findings reported in Chapter V, we will not expect very many powerfully explicative relationships at the organizational level of analysis, but we will continue to explore the data relevant to both the organizational and personal dimensions of the social structure and professional role relations of these actors in educational systems.

Staff Views of the Principal

It is clear that the way teachers view their principal is likely to have an important influence upon their own school-related attitudes and behavior. Several dimensions of principal role behavior are examined here; all focus upon aspects of leadership in a professional bureaucracy. To the extent that this professional bureaucracy remains growth-oriented and open to mutual influence attempts, teachers will be likely to be full and satisfied role occupants in it. The varied aspects of the principal's leadership role in the school assessed here include his supportiveness in professional matters, the personal or impersonal quality of his inter-status relations, his willingness to share decision making power, his general accessibility or availability to teachers, and the closeness of his supervision. In addition, the principal's ability to exert influence on decision making processes within his staff and with his own supervisory colleagues is assessed. In all cases in this section our data comes from teacher perceptions of principal styles and behaviors.

Teachers' views of the principal's concern and support for their professional growth and development is assessed by responses to the following items; agreement signifies principal support and leadership in professional matters.

The principal encourages and supports new ways of teaching.

The principal encourages continued professional training.

The principal helps teachers deal with their classroom problems.

The principal brings educational literature, conferences, etc., to the attention to teachers.

Tables 58A and 58B present the relationship between teacher responses to this scale of principal behavior and their own professional role activity.

(Tables 58A and 58B here)

The data in Table 58A indicate clearly that there is no relation between teachers' perceptions of the principal's support for innovation and their own efforts in this regard. Chesler (1966) also reports nonsignificant results with a similar scale, although he finds that the stem "Has constructive suggestions to offer teachers in dealing with their problems" is significantly related to teacher innovation ($p. < .05$). In Table 58B there appears to be a nonsignificant but positive trend to the association between perceptions of supportive principal behavior and teacher sharing of classroom practices.

TABLE 58A

TEACHER PERCEPTION OF PRINCIPAL PROFESSIONAL SUPPORT RELATED TO INNOVATION

Principal Support	Innovation No	Yes	Total
	(N=138)	(N=232)	(370)
Low	38%	62%	(N=151)
Medium	37%	63%	(N=169)
High	36%	64%	(N= 50)

$X^2 = .05$; NS

TABLE 58B

TEACHER PERCEPTION OF PRINCIPAL PROFESSIONAL SUPPORT RELATED TO SHARING

Principal Support	Sharing Low	High	Total
	(N=166)	(N=202)	(N=368)
Low	50%	50%	(N=146)
Medium	44%	56%	(N=170)
High	36%	64%	(N= 52)

$X^2 = 3.1$; $p. < .1 > .05$

The degree to which the principal is seen to engage in behavior that encourages informal and warm personal relations between himself and his staff is assessed by the following items:

> The principal demonstrates a warm personal interest in the staff members.
>
> Teachers call the principal by his first name.
>
> Relationships between the principal and teachers are formal.
>
> The principal calls teachers by their first names.

The data indicate that there are no significant associations between teachers' responses on this dimension of principal-staff relations and their innovation or sharing of teaching practices.

The third dimension of principal-teacher relations assessed here is the degree to which the principal is seen as sharing his decision making power with teachers. The degree to which the principal is seen to share such power is measured by teacher responses to the following items:

> The principal seeks suggestions from teachers.
>
> The principal consults with teachers before making major decisions at school.

Tables 59A and 59B present the data indicating no significant relation between teachers' perceptions of their principal's consultation or elicitation of their concerns or wisdom and professional innovation and sharing.

(Tables 59A and 59B here)

The fourth major dimension of principal behavior reviewed concerns the degree to which teachers feel that the principal is interested and available for discussion with them. Teacher views regarding the accessibility of their principal for advice and influence is assessed by asking staff members whether:

TABLE 59A

TEACHER PERCEPTION OF PRINCIPAL SHARING OF POWER RELATED TO INNOVATION

Degree of Shared Power	Innovation No	 Yes	Total
	(N=132)	(N=225)	(N=357)
High Sharing	36%	64%	(N=214)
Low Sharing	38%	62%	(N=143)

$X^2 = 0.2$; NS

TABLE 59B

TEACHER PERCEPTION OF PRINCIPAL SHARING OF POWER RELATED TO SHARING

Degree of Shared Power	Sharing Low	 High	Total
	(N=159)	(N=199)	(N=358)
High Sharing	41%	59%	(N=215)
Low Sharing	49%	51%	(N=143)

$X^2 = 2.04$; NS

Teachers feel that it is all right to ask the principal for help.

The principal has ample time for conversation with teachers.

Neither dependent variable is associated significantly with such assessments of principal accessibility.

The final dimension of principal-teacher relations concerns the degree to which staff members feel the principal closely supervises their classroom and organizational performance. The items utilized to assess this variable include:

The principal checks closely on teachers' classroom performance.

The principal allows teachers to violate minor rules.

Parallel to the above findings, there are no significant and important associations between this independent variable and dependent performance measures. These negative findings are evidently quite consistent across all five dimensions or variables of principal behavior.

In addition to concerns about the relations of these dimensions of perceived behavior to professional role performance, we are interested in the extent to which such principal-teacher variables may be related to teachers' feelings of alienation from school. Summaries of chi square operations performed with these data are presented in Table 60.

(Table 60 here)

With the exception of principal accessibility to his staff, each dimension of perceived principal behavior is significantly associated with teachers' alienation from school. Teachers who perceive their principal as more supportive of their professional growth are less likely to feel alienated from school; teachers who feel their principal is more personal and

TABLE 60

SUMMARY OF CHI-SQUARE TABULATIONS RELATING TEACHERS' PERCEPTIONS OF PRINCIPAL BEHAVIOR TO ALIENATION FROM SCHOOL

Dimension of Principal Behavior Related to Alienation	X^2 Value	DF	Level of Significance	Direction
Professional Support	23.8	2	$<.01$	Negative
Personal Relations	16.2	2	$<.01$	Negative
Sharing of Power	16.1	2	$<.01$	Negative
Accessibility	.8	2	NS	
Close Supervision	18.9	2	$<.01$	Negative

informal, shares decision making power to a greater extent and supervises them more closely also are less alienated. The last finding contradicts our expectations, which suggested that less supervision would lead to less alienation. However, this population may experience such supervision as helpful and interpret it as a gesture of concern and support rather than distrust or coercion.

The principal's ability to influence school policy by making his ideas felt both within the school and with his supervisors is another variable investigated here. Data relevant to staff perceptions of this influence is reported in Tables 61A and 61B, 62A and 62B.

(Tables 61A and 61B, 62A and 62B here)

Staff members who see their principal as having substantial upwards influence relative to the superintendent appear to innovate and share slightly more often than those who see the prinicipal as having little upwards influence. The relationship between upwards influence and innovation is statistically significant (p. $<$.05) for secondary school teachers, who we may expect to be in closer proximity to the superintendent and therefore desiring greater insulation and security. With regard to downward influence, the data indicate that teachers who see their principals as having or exerting minimal downwards influence tend to innovate slightly more often. There does not appear to be any meaningful trend to the data regarding the sharing of teaching practices. These dimensions of the principal's perceived influence ability are not associated significantly with teachers' alienation from school.

In summary, it appears that none of these teacher perceptions of principal behavior and style are associated significantly with professional

TABLE 61A

TEACHERS' PERCEPTION OF PRINCIPAL'S UPWARDS INFLUENCE RELATED TO INNOVATION

Perception of Principal's	Innovation		
Influence	Yes	No	Total
	(N=224)	(N=133)	(N=357)
Less Than Superintendent	64%	36%	(N=162)
Same as Superintendent	57%	43%	(N=138)
More than Superintendent	74%	25%	(N= 57)

$X^2 = 4.75$; p. $< .10 > .05$

TABLE 61B

TEACHERS' PERCEPTION OF PRINCIPAL'S UPWARDS INFLUENCE RELATED TO SHARING

Perception of Principal's	Sharing		
Influence	Low	High	Total
	(N=160)	(N=198)	(N=358)
Less Than Superintendent	48%	52%	(N=163)
Same as Superintendent	46%	54%	(N=130)
More Than Superintendent	32%	68%	(N= 57)

$X^2 = 4.70$; p. $< .10 > .05$

TABLE 62A

TEACHERS' PERCEPTION OF PRINCIPAL'S DOWNWARDS INFLUENCE RELATED TO INNOVATION

Perception of Principal's Influence	Innovation Yes	No	Total
	(N=226)	(N=135)	(N=361)
Less Than Teachers	78%	22%	(N= 36)
Same as Teachers	64%	36%	(N=134)
More Than Teachers	59%	41%	(N=191)

$X^2 = 4.97$; $p. < .10 > .05$

TABLE 62B

TEACHERS' PERCEPTION OF PRINCIPAL'S DOWNWARDS INFLUENCE RELATED TO SHARING

Perception of Principal's Influence	Sharing Low	High	Total
	(N=162)	(N=200)	(N=362)
Less Than Teachers	37%	63%	(N= 41)
Same as Teachers	47%	53%	(N=130)
More Than Teachers	45%	55%	(N=191)

$X^2 = 1.37$; NS

innovation and sharing. These bureaucratic elements of professional leadership are not related to teacher role performance, although they are related to teacher feelings of alienation from school. Perceptions of influence and power, however, although not statistically significant, do stress the importance of a principal who can represent his staff externally or mediate outside influence, as well as provide freedom for staff influence within. It may be that the exertion of minimal internal influence is a phenomenon consistent with the apparent irrelevance of teacher perceptions of other aspects of leadership behavior.

Principal Background and Orientation

There are 20 principals in this sample of 21 schools; one administrator has the responsibility for supervising two schools. Most of the principals are males in their mid-forty's. Some are brand new in this role, others have been principals for over 13 years. Eight principals have been in their present school for less than 3 years and 5 have been principals of their school for over 10 years.

When asked to indicate the learning emphases characteristic of their school, the majority of principals select as priorities intellectual goals; and the majority again emphasize these orientations when selecting primary objectives for the years ahead. The improvement of academic achievement at all levels and increasing motivation and desire to learn are the most commonly felt objectives for these principals as well as for their teachers. Despite the apparent relevance of these priorities, the data in Table 63 indicate there is no relation between such principal priorities and staff innovation and sharing.

(Table 63 here)

One of the important dimensions of staff relations we have examined is the teachers' perceptions of the principal's leadership style. In general,

TABLE 63

PRINCIPAL PRIORITY ON SCHOOL OBJECTIVES OF INCREASING MOTIVATION TO LEARN AND ACADEMIC ACHIEVEMENT RELATED TO STAFF INNOVATION AND SHARING

Priority Level	N	Staff Innovation	Staff Sharing
Low	7	63.3%	3.15
High	8	65.9%	3.16
		U = 23; NS	U = 23; NS

these perceptions have not been associated with professional leadership style, innovation and sharing. Now we review the reciprocal perceptual relationship; the relation between how the principal perceives his role relations with his staff and their professional behavior. In an attempt to view such concerns principals were asked to respond to the following items:

What my teaching staff think is very important to me.
I am close to the teachers in my school
I enjoy working in this school system.

A positive response to all three indicates the principal feels he is highly oriented to the importance of teacher concerns and responses. Table 64 presents the relation between these principal role orientations and staff innovation and sharing.

(Table 64 here)

Neither alienation nor innovation is significantly related to the principal's orientation toward his staff, but there is a slight trend for staff sharing to be negatively related to this variable. Principals who are less concerned about and close to their teachers have staffs with a slightly higher sharing rate. This result, although neither expected nor significant, is consistent with some of the other negative results regarding the effect of the principal's role vis-a-vis teachers innovation and sharing.

The principal's own perception of his power in the school system is also likely to influence the way he operates as a staff leader and how he is experienced by his teachers. The pattern of perceived and desired influence reported by principals is presented in Figure 4.

(Figure 4 here)

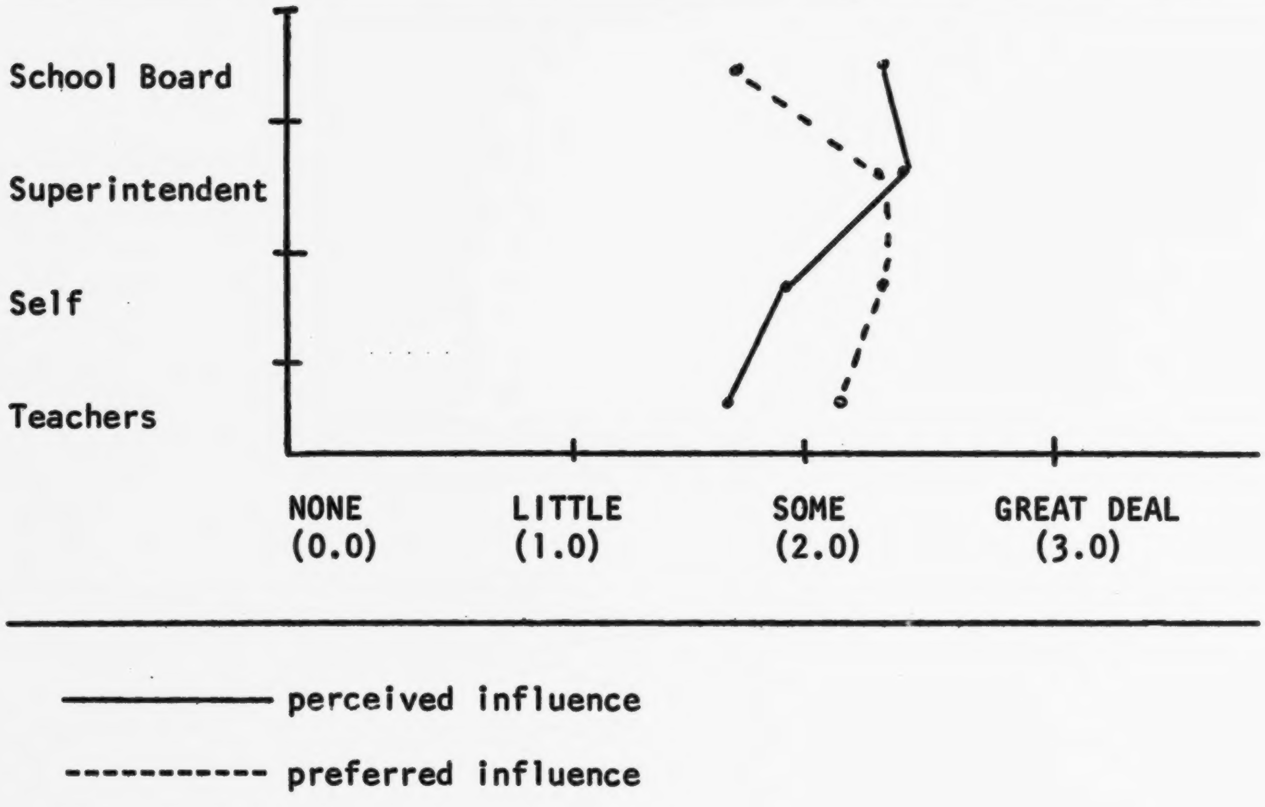
TABLE 64

PRINCIPAL'S ROLE ORIENTATION WITH TEACHERS RELATED TO STAFF INNOVATION AND SHARING

Principal's Role Orientation	N	Staff Innovation	Staff Sharing
High teacher orientation	9	61.0	2.70
Low teacher orientation	8	68.8	3.45
		U-26: NS	$U=16: p < .1 > .05$

Figure 4

PRINCIPAL PERCEPTIONS AND PREFERENCES OF VARIOUS PARTIES' INFLUENCE ON SCHOOL POLICY



In many respects the principals' perceptions and preferences are quite like the teacher preferences presented in Figure 3 on page 109 of this report. There is a consistent perception that persons occupying roles higher in the administrative hierarchy exert more influence than persons occupying lower status roles. Moreover, there is consistent dissatisfaction with this state of affairs; there is a clearly and consistently expressed desire for the influence of persons higher in the administrative hierarchy to be diminished, and for the influence of those persons at lower levels and in the local schools to be increased.

The principal's perception of his upwards influence relative to the superintendent and his downward influence relative to his teachers is measured in the same way as teachers' perceptions of his influence. The relations between a principal's perceived influence and staff innovation and sharing are presented in Tables 65A and 65B.

(Tables 65A and 65B here)

Whether the principal perceives either his own upwards or downwards influence as high or low does not appear to be associated with any greater or lesser amounts of staff sharing or innovation.

In summary, it appears that different principal conceptions or perceptions of their own leadership style are not reflected in different staff patterns of professional performance. It is clear that principals consider intellectual and academic pursuits to be of prime importance but these priorities are not associated with staff innovation and sharing. Similarly, principals share with teachers the perception that influence on school policy is: (1) distributed hierarchially, with greatest power centered in those persons of highest status and most removed from the local school; and

TABLE 65A

PRINCIPAL'S PERCEPTION OF HIS OWN UPWARDS INFLUENCE WITH THE SUPERINTENDENT RELATED TO STAFF INNOVATION AND SHARING

Upwards Influence with Superintendent	N	Staff Innovation	Staff Sharing
Low	9	64.0	2.80
High	8	65.4	3.34
		U=36: NS	U=27: NS

TABLE 65B

PRINCIPAL'S PERCEPTION OF HIS OWN DOWNWARD INFLUENCE WITH TEACHERS RELATED TO STAFF INNOVATION AND SHARING

Downward Influence with Teachers	N	Staff Innovation	Staff Sharing
Low	12	63.5	3.28
High	5	66.6	2.53
		U=25: NS	U=17: NS

(2) distributed unwisely, so that all prefer a redistribution favoring greater power vested in the hands of the local administrator and his staff.

Principal-Staff Congruence

Since the teachers and the principal in any building constitute the bulk of the professional staff and resources available in the learning environment, the manner in which they collaborate and cooperate is a critical educational concern. When the principal and his staff perceive the school social system and school priorities in much the same way, they are more likely to be able to collaborate effectively in working within this social and normative structure. Furthermore, it is apparent that effective educational managers must be in touch with the standards and relationships of their staff members. One important index of this aspect of a managerial role is the degree of principal knowledge about what's going on in his staff. The scientific literature reviewed earlier suggests that to the extent the principal is accurate about the character and organization of peer relations, he is in a better position to exert influence on his staff if he so wishes. Agreement on the nature of the game is as important in this respect as in our earlier discussion of congruence or agreement among teachers themselves.

The first aspect of principal staff congruence assessed here is the nomination of staff sociometric leaders. The principals were asked to identify their sociometric choices on the three dimensions of communication, influence and liking; and then a principal's nominations were compared with his staff's nominations on the same question. The principal receives 1 point for each of his nominees who receives 1 nomination more than the staff mean on the peer choice system; he receives 2 points for each of his nominees who receive 2 nominations more than the staff mean of peer choices;

and he receives 3 points for each of his nominees who receives 3 or more peer nominations more than the staff mean. Since the principal was asked to nominate 3 teachers, he can receive up to a total of nine points on each dimension. The sample of schools was divided on the basis of a higher or lower principal score, and Tables 66, 67 and 68 demonstrate the relations between such principal-staff congruence and staff innovation and sharing.

(Tables 66, 67, and 68 here)

In general there is a slight trend indicating that congruence on this aspect of the school social structure is associated with greater staff innovation and sharing. This trend is statistically significant, however, only in the case of liking preferences. It also appears that this trend is stronger in relation to staff sharing than staff innovation. The greater potency of association between sociometric variables and sharing has been a consistent finding throughout the study.

These trends and significant findings also are reflected in the relation between the degrees of principal-staff agreement regarding innovative teachers and staff innovation and sharing. Each principal was asked to nominate those staff members who they saw as most active in innovating classroom practices, and teachers were asked the same question:

> We are interested in significant classroom practices for improving pupil learning or motivation to learn. On this roster of staff members of this school please indicate any significant classroom practices you know teachers are using or have used. Please write a brief description of the practice next to each teachers' name if you can.

Only seven principals made such nominations and those who were congruent with their staffs are in schools with a slightly greater percentage of

TABLE 66

PRINCIPAL-STAFF CONGRUENCE ON COMMUNICATION SOCIOMETRIC RELATED TO STAFF INNOVATION AND SHARING

Degree of Congruence	N	Staff Innovation	Staff Sharing
High Congruence	(8)	64.4%	3.11
Low Congruence	(7)	61.4%	2.74
		U=22;NS	U=18; $p < .10 > .05$

TABLE 67

PRINCIPAL-STAFF CONGRUENCE ON INFLUENCE SOCIOMETRIC RELATED TO STAFF INNOVATION AND SHARING

Degree of Congruence	N	Staff Innovation	Staff Sharing
High Congruence	(10)	66.8%	3.27
Low Congruence	(6)	61.5%	2.75
		U=22;NS	U=17:NS

TABLE 68

PRINCIPAL-STAFF CONGRUENCE ON LIKING SOCIOMETRIC RELATED TO STAFF INNOVATION AND SHARING

Degree of Congruence	N	Staff Innovation	Staff Sharing
High Congruence	(6)	65.0%	3.56
Low Congruence	(6)	54.3%	2.04
		U=6; $p < .05$	U=0; $p. < .001$

innovation (75.7%) than those principals with a low degree of such innovation (62.5%). However, this difference is not statistically significant, no doubt due to the small sample of principals responding.

Of perhaps greater interest is the comparison between staff innovation and sharing in those schools in which the principal responds to that question and in those schools in which he did not. These data are presented in Table 69.

(Table 69 here)

In schools in which the principal responds there is significantly more professional sharing than in schools where he does not respond. A similar trend exists with regard to innovation, although the latter findings do not approach statistical significance. Principal response to that question may be interpreted as a sign of interest in the broad issues of professional innovation and sharing. This interest may well be evident to his staff, thus encouraging if not innovation, at least willingness to share innovations in public.

Another area of potential agreement or congruence relevant for our concerns is principal and teacher perceptions of the way teachers spend their day at school. Teachers and principals were asked a number of questions about daily tasks, and their respective responses were assessed for congruence. Then such congruence or lack of congruence was related to staff innovation and sharing. Findings using two of the most illustrative stems are presented in Table 70.

(Table 70 here)

It is interesting that high and low principal-staff congruence on these two stems are related very differently to the dependent variables. Lower

TABLE 69

PRINCIPAL RESPONSE TO REQUEST FOR IDENTIFICATION OF STAFF INNOVATORS RELATED TO STAFF INNOVATION AND SHARING

Response	N	Staff Innovation	Staff Sharing
Made nominations	(7)	68.1%	3.62
Did not make nominations	(14)	60.4%	2.70
		U=35;NS	U=20; p.$<$.05

TABLE 70

PRINCIPAL-STAFF CONGRUENCE ON THE WAYS TEACHERS SPEND THEIR TIME RELATED TO STAFF INNOVATION AND SHARING

Ways Teachers Spend Their Time and Degree of Congruence	N	Staff Innovation	Staff Sharing
Teaching Students Academic Materials			
High Congruence	(13)	63.3%	2.77
Low Congruence	(4)	69.0%	3.96
		U=19;NS	U=7; p.$<$.05
Keeping Records and Administrative Duties			
High Congruence	(4)	66.3%	3.61
Low Congruence	(5)	58.4%	2.23
		U=8;NS	U=2; p.$<$.05

congruence seems to be related positively to staff innovation and especially sharing when it pertains to perceptions of the amount of time spent teaching students academic materials; higher congruence seems to be related positively to innovation and especially sharing when it pertains to perceptions of the amount of time spent on keeping records.

It is quite provocative to consider what is occurring in those cases where principal-staff disagreement tends to be related to more staff innovation and sharing. The sample is often too small and the results insignificant, so these data cannot be considered as unequivocal or unambiguous findings. But such results do provide some fruitful avenues for speculation: it may well be that a school staff and a principal can collaborate without congruent perceptions of their environs; or, it may be that a staff can engage in innovation and sharing without a high degree of over staff-principal cooperation and collaboration.

The final set of variables investigated with regard to the effect of principal-staff congruence concern various ideological perspectives and preferences for school priorities and objectives. In every case of these dimensions of staff-principal congruence insignificant results were obtained with regard to their effects upon innovation and sharing. One of the potential reasons for this finding is also quite pertinent to much of the other data in this section. In a sizable number of schools--from 4 to 14 out of the total sample of 21, depending upon the variable--principals did not respond to the questions. Without principal response no assessment of principal-staff congruence can be made. Furthermore, taking a single central tendency measure as indicative of staff response presents problems as well. In some cases a clear central tendency does not exist and substantial variation is unfortunately then reduced to create a mean. The central tendency may be missing because: (1) on some questions a great diversity of potentially discreet responses may be used by a staff; and (2) on some questions sub-groups of the staff may respond very differently to a response continuum. In this respect we encounter a problem quite similar to the general issues regarding the organizational level of analysis treated in Chapter 5. For these various reasons interpretation of the positive, negative and ambiguous findings in this section must be treated very cautiously.

In summary, where sufficient principal responses were available to permit the investigation of staff-principal patterns of congruence or noncongruence the findings were mixed. Some clear relationships exist between principal-staff congruence on staff-sociometric patterns and staff innovation and sharing. The nomination of best liked colleagues is the most potent of these sociometric patterns. In some cases, notably with respect to assessments of how teachers spend their time in school, principal-staff congruence is significantly associated with both more and less staff sharing. Underlying these findings are the general problems of the management of data at an organizational level of analysis, further complicated by a sometimes serious lack of principal responses to questions.

Summary of Teacher-Principal Relations

The findings in this chapter provide only minimal support for the expected relations between principal style and teacher innovation and sharing. The data regarding teacher perceptions of principal behavior are particularly disappointing. Teacher perceptions of various aspects of principal organizational leadership are not related to professional innovation and sharing. Principal professional support, informality in relations, shared decision-making, accessibility and closeness of supervision are the elements of leadership in a professional bureaucracy that are so reviewed. Several of these elements are associated significantly with teachers' feelings of alienation from school; teachers who perceive their principal as more supportive, more personal, more open to shared decision making and more closely supervising are less alienated. The fact that several aspects of teacher perceptions of principal behavior are related to alienation even though they are not related to innovation and sharing suggests that the principal variables are potent in at least some respects. It may well be that just those particular aspects of leadership in a professional bureaucracy that are tested here are not relevant for teacher role behavior.

One element of perceived principal behavior that does demonstrate a slight relation with professional role behavior is his upwards and downward influence on school policy. Teachers who feel that their principal has more influence with the superintendent are slightly more likely to innovate and share new practices than are teachers who feel their principal has less external influence. Conversely, teachers who feel that their principal has less influence with the teachers are more likely to innovate than are teachers who feel their principal has more internal influence. These findings lend partial confirmation to the notion that a principal must be seen as able to represent and protect his staff with external influence, but also seen as providing freedom and lack of coercion internally.

It does not appear that principals' own perceptions or orientations regarding their philosophy, leadership role or influence ability are associated with their staff's professional innovation or sharing. These findings are not surprizing, they are no doubt due partially to the small sample of principals responding and the limited range of their responses. Furthermore, teachers' behavior is more likely to be affected by their perceptions of, and reactions to, the principal rather than by his self-perception and self-report of his own interests and priorities.

The degree of perceptual and attitudinal congruence or agreement between the principal and his staff members has been suggested as an important variable in school relations. Congruence, or the lack of it, appears to be relevant with regard to the structure of peer liking in sociometric relations. In schools where the principal and his staff were in a high degree of congruence on the selection of liking leaders there is significantly greater staff innovation and sharing. The degree of staff-principal congruence on communication and influence sociometrics is not associated significantly with either innovation or sharing. Other findings regarding the effects of principal-staff congruence are quite mixed, suggesting that: (1) sometimes congruence facilitates staff innovation and sharing; (2) sometimes congruence may inhibit or deter experimentation and its public report; (3) congruence on some variables is simply irrelevant to the dependent variables under investigation here.

Throughout portions of this chapter problems of data analysis are encountered which parallel those discussed at length in chapter five of this report. The reduction of deviance created by the use of central tendency measures and the limited range different school patterns available in the sample make use of the organizational level very difficult. With regard to principal data, these problems are complicated by a small sample that is further diminished by a relatively low rate of questionnaire completion.

CHAPTER VII

SUMMARY

In this chapter we review the major theoretical principles and the sample and methods utilized in this study. Further, we review the empirical findings describing the roles played by individual teacher backgrounds and priorities, school peer and principal relations, and the school's organizational climate in the facilitation or inhibition of teacher innovation and sharing. The central concern in this study has been to understand those personal and organizational conditions associated with the innovation and sharing of classroom teaching practices. By classroom teaching practices we mean the methods and techniques that the teacher uses in his or her own classroom. Throughout this report we have relied upon teachers' judgments and self-reports of their own innovativeness and their own views of school conditions, preferring to work with these phenomenological aspects of the educational system.

The stimulation of innovative teaching seems to be a critical issue in American schools since teachers constantly develop and must constantly screen and improve new techniques and new strategies for managing their classrooms. Youngsters are always changing, the world they live in changes, and the world of knowledge certainly changes at such a pace that to deny or inhibit innovation in this important aspect of human relationships is to frustrate and stagnate the potentiality for continual student growth. But it is not enough for individual teachers to be inventive or innovative in their own private classrooms; it is also important that these practitioners share their new ideas with their colleagues. Only through this process of sharing can peer expertise be brought to bear to evaluate critically and to support helpfully one another's work. Moreover, only through this public process can other teachers see and hear about important and exciting innovations and thereby make informed decisions as to whether they wish to adapt or adopt such techniques for their own classroom usage.

The review of the theoretical and research literature relevant to the management of educational organizations, the classroom teaching process, and the study of innovations led us to a focus upon three critical aspects of the school social organization. The first aspect of course is the individual teacher; in this study we have inquired into varied aspects of the teacher's ideological perspective, family background, educational background, teaching experience and certain personality characteristics. A second major aspect of this study has been the character of teacher peer relations; notably the kinds of power and influence relations, exchange relations, liking patterns and feelings of involvement and or alienation that exist in the staff of the local school. In addition to these individually reported aspects of peer relations, we have also attempted to describe the organizaional climate of the school by various group or organizational measures of peer relations. The third aspect of this study is the role played by the school principal, the manager of the local educational organization. We have inquired into teachers' views and perceptions of the principal, the principal's perception of his own role, and those instances of perceptual and attitudinal consensus or mutuality between teachers and principals. Throughout the study we have relied upon data collected from 499 teachers in 21 elementary and secondary schools in 3 communities in the Northern Midwest.

Summary of the Findings

With regard to individual teacher characteristics, it is interesting that age, sex, and length of time spent in the teaching profession do not relate significantly to teacher innovation and sharing of classroom practices. However, some more specific aspects of experience such as length of time teaching a specific grade or subject do relate significantly and negatively to the innovation and sharing of teaching practices. Teachers who are relatively new to the profession but who have had some specific experience teaching are likely to be most often involved in trying out new ideas in their classroom and communicating these ideas to their colleagues.

There does not appear to be any systematic relationship between advanced educational training and professional innovation and sharing, but there does seem to be an interaction between advanced training and level of instruction that is relevant for certain types of innovation. In general, elementary school teachers with more advanced training and secondary teachers with less advanced training innovate classroom practices that are higher in behavioral orientation. The kinds of advanced training elementary and secondary teachers have had may differ greatly; the former may take more general education and broadly based social science courses while the latter may be more involved in working for an advanced degree in their specific academic specialty. Thus the differential character of their advanced training may explain the different effects of this variable at the elementary and secondary levels of instruction. Teachers trained in liberal arts background in college appear to be more highly involved in sharing. Because teachers with a liberal arts background are more likely to teach in secondary schools it is unclear whether this finding is a function of secondary school activities or of the type of educational training they have had. It is conceivable that liberal art graduates are less constrained by traditional professional norms and more urgently desire to talk with their new colleagues.

Several measures of general personality dispositions, such as a variety of social needs, a sense of anomie, attitudes toward authority, and generalized alienation are not significantly related to the innovation and sharing of teaching practices. However, teachers who grew up and attended schools in rural areas are less likely to innovate and share professional practices than their more early urbanized colleagues. It seems that this finding says more about teachers' exposures during their own school days than it does about personal styles often associated with rural life. A general interest in change and the development of new ideas is related positively to the public aspect of classroom creativity - sharing practices with colleagues.

Emphases on certain educational values, namely a priority concern for academic excellence as a preferred outcome of teaching, do seem to be related significantly to innovative teaching. Teachers who are particularly concerned with building pupil-planned and informal classroom atmospheres seem to share their techniques more than their colleagues of opposed persuasions. Pupil planning orientations also are associated with teachers' reports of more behaviorally focussed practices. Finally, secondary school teachers who report that they spend a great deal of time on their classroom teaching duties innovate and share more than their colleagues. This finding is not present among elementary school teachers, where so many teachers report such a time commitment that there is insufficient variance to test the dependent variable relation.

It is perhaps in the area of teacher-peer relations that this study produced the most interesting and provocative findings. This may be partly true because colleague relations is an area of organizational life largely neglected in the scientific study of education. Although a feeling of alienation from school is not generally related to professional role performance, it is related negatively to both innovation and sharing for secondary school teachers. For elementary school teachers, who for the most part work in smaller schools with more cohesive linkages among colleagues, alienation is not a significant factor. Furthermore, those teachers who have a sense that their own personal power and the power incumbent in their role is influential in school decision-making processes more often are involved in professional innovating and sharing. Those teachers who want to be more involved and powerful in decision-making also innovate more often. It would seem that teachers who are dissatisfied with the power they have, and who wish to have more local decision-making control, are most highly involved in those aspects of the profession relevant to the inventive improvement of classroom teaching. The data are quite clear in indicating that teachers are generally dissatisfied with the distant and heirarchial control patterns evident in their schools. Most teachers would like to rearrange the system so that greater decision-making power would be vested in themselves, their colleagues and their local principals. Those teachers who feel more powerful on these various dimensions of their role in school are also less alienated from school.

In another vein, those teachers who perceive themselves in the midst of informal staff groupings are more likely to innovate and share practices than are their colleagues who feel they are on the periphery or even are excluded from informal networks. Teachers who see the staff, and their roles within the staff, as more cohesive, personal and friendly are least likely to feel alienated from school. With regard to the system of professional exchange and communication, it is clear that teachers who are more intimately involved in such professional transactions with their colleagues are also more likely to be highly involved in innovating and sharing. Teachers who are highly nominated by their colleagues on a sociometric communication measure, teachers who travel to school with their colleagues, and teachers who serve on staff committees that necessitate their involvement with colleagues on professional matters more often are involved in sharing. The sharing of classroom practices requires some mechanism for information processing among peers while innovation does not; this helps explain why these variables stressing access to communication channels are more highly related to sharing than to innovation.

It is interesting that among those teachers who innovate, those who travel to school with colleagues seem to adapt and adopt practices more often than those who travel to school alone. Those innovators who travel to school alone more often report that they invent practices than do those teachers who travel to school with colleagues. Similarly, those teachers who serve on school committees are more likely to report that they adapt or adopt others' innovations than they are to invent their own. A core issue here seems to be the combination of public access to others efforts and time and energy for creative work. Teachers who are highly involved in school committees may not have the opportunity to be inventive in their own personal classroom; but they may be firmly entrenched at the crossroads of staff communication patterns and may have much better access to the shared ideas of their colleagues. All of these dimensions of communication and exchange within the school are related negatively to teacher feelings of alienation. With regard to communication that extends beyond local school environs, it appears that teachers who attend professional meetings do not innovate more often than colleagues who do not attend such events; but when they do innovate the practices show greater behavioral orienation.

In the study of the organizational climate of schools those variables which attempt to assess the degree of peer agreement on the nature of the school organization demonstrate the most significant relations with teacher innovation and sharing. Staffs in which peers perceive their own social structure similarly seem to innovate and share more often than others'. Sociometric variance scores, correlations between sociometrics and mutuality in choices are not associated significantly with staff innovation and sharing measures. Staff feelings that there are strong pressures upon them to conform to school norms and procedures are negatively related to innovation and positively related to alienation. With regard to these particular findings regarding organizations, of course, our sample is no longer 499 teachers but 21 schools. Therefore, significant relations are not found very often because the sample has been so considerably reduced. In addition, to take central tendency measures in any population creates the potential for seriously distorting the range that exists in that population. A number of problems related to the management of data at the organizational level of analysis are reviewed in the summary to Chapter V.

The results of the investigation of principals' efforts associated with teacher innovation and change are not very productive. There is no apparent relation between teachers' perceptions of principals' support for innovative teaching and their own creative efforts. Other dimensions of principal behavior which are similarly irrelevant to innovation and sharing include his: informal relations with staff, accessibility, sharing of decision-making power and supervisory emphasis. However, teachers who see their principal as exerting substantial upwards influence with the superintendent and minimal downwards influence on the local staff are most likely to innovate. Some guarantee of professional autonomy in the form of mediation of external pressures and freedom from internal pressures may be at work here.

Principal-staff congruence on professional matters seems to be relevant for staff innovation and sharing, but more so for sharing than for innovation. For instance, in schools where the principal and the staff agree on the identity of sociometric leaders - communicators, likers and innovators - there is higher sharing on the staff than in schools with low agreement. On some items regarding the assessment of how teachers spend their time daily, however, principal-staff congruence is related negatively as well as positively to staff sharing. This raises the possibility that in certain areas professional growth may be facilitated best by mutual ignorance on matters that are not particularly relevant.

Finally, it is noteworthy that principal response rate to these questionnaires is quite low. If such response is taken as an indication of interest in the scientific improvement of education it is relevant that principals who do respond have staffs that manifest higher degrees of sharing. Throughout Chapter VI it is clear that principal variables and principal-staff relations often are not associated directly with staff innovation and sharing. When significant findings do occur they are more often associated with indices of staff sharing than with staff innovation. These findings suggest that the principal may be more facilitative of professional growth by his indirect efforts at encouraging a supportive peer network than by direct efforts at stimulating teacher change.

Implications for the Planning of Change

It seems quite clear that some very important general implications can be drawn from the findings of this study. It is not our intention here to go into detail into such implications, or to derive specific action steps from them; that is the business of our companion report (Fox & Lippitt, 1967). But it is our interest to develop some general implications for school change which may be focussed upon by concerned educators and scholars. In the first place, it appears quite clear that there is not a great amount of sharing going on among school staffs. Goodly numbers of teachers are inventing practices for use in their classrooms, but there is no evidence that these teachers are inventing particularly high quality practices nor that they are sharing these practices in profusion. This means there is no obvious or potent check that exists to inspect, screen, criticize, develop or support higher quality, potentially more successful classroom practices. As a result the teaching profession is clearly denied some of its critical resources that may be useful in the improvement of instruction.

The findings seem to indicate that before teachers can truly feel free to invent and share their new ideas for classroom practices, they need some experience at a particular grade or subject level. The security and experience attendant upon being in and managing the same curriculum over a period of years seems to provide the maximally stimulating conditions for inventiveness and for the willingness to be public about one's inventiveness. However, once they are in a school for several years this creative and inventive stance seems to dissipate and be absorbed by other priorities in the school, the community or at home. These findings may suggest the development of a pattern of rotation of teachers into occasional new assignments within the school. Another possibility would be to engage especially creative in-service efforts geared for older more established teachers.

If we are concerned about the development of behaviorally oriented innovations in both elementary and secondary schools it may be important to attempt some change in teachers' pre-service training programs. The concern for innovative teaching, for teaching techniques that focus on the behavioral implementation of knowledge, and for the utilization of peer resources in improving teaching might be built into programs in schools of education. Teacher training institutions may also attend to the specific problems in preparing their students for work in a professional bureaucracy. The more new teachers understand about the organizations and institutions they are to work in, the more conscious and productive decisions they can make about their socialization into the profession.

It seems to be quite critical for teachers to feel a sense of direction for their own school policy and relatively intimate contact and support from their colleagues. Without these supports, teachers are unlikely to venture very far beyond the standard curricula and techniques designed for their classroom. Even more importantly, however, they are very unlikely to be willing to share ideas with their colleagues and thus run the risk of negative evaluation, approbation and rejection. It seems that the most likely conditions facilitating the generation of peer support for all kinds of professional risk taking occur when there is low teacher alienation and high involvement in the school's decision-making processes and in staff communication patterns. Moreover, it seems important that teachers' feelings of professional and personal autonomy are augmented by peer support systems. In this sense, it must be incumbent upon every school administrator to attempt to reduce teacher alienation, to increase teachers' sense of their own power and direction in school affairs, and to encourage and facilitate the development of informal and formal mechanisms for the creation of dialogue and communication among professionals. This very energetic creation or utilization of a human network to encourage creativity and sharing may be seen as the most critical skill to be developed by emerging school administrators. Through these kinds of peer communication patterns teachers can begin to share their own perceptions about the character of their local school, about the problems and processes of their own classrooms, and about the positive and negative aspects of their own teaching.

Despite all efforts to build an internal support system for teacher growth and change, there is occasionally the necessity for educators to reach beyond their own resources at certain times and places to find and respond to an extraordinary stimulus. A conference or institutional design that reaches beyond the walls of the school to bring teachers into contact with colleagues in different schools or in different school systems may be most helpful in broadening the available base of professional expertise. In these meetings, in-service programs or research-utilization efforts aimed at the development of professional expertise and sharing, inputs may be made that can help teachers see peer exchange as a critical item on their professional agenda. Moreover, new ideas for classroom management and new stimuli for planning institutional growth and development programs may be provided through such resource linkages.

These implications are developed in fuller detail in the companion volume to this report (Fox and Lippitt, 1967). There they are linked to concrete programs and experiments that attempt to utilize these data for school change. The combination of the two reports represent one effort in the attempt to connect basic research in the behavioral science of education to programs of utilization and change for educational practitioners and practitioner institutions.

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Appendix A

Teacher Instruments

Institute for Social Research, University of Michigan
Michigan Department of Classroom Teachers
Belleville, Brighton, Chelsea and Romulus School Districts

Part II

The purpose of this questionnaire is to gather information about significant classroom practices that relate to the improvement of learning, to understand teachers' feelings and opinions, and to gain a better understanding of relationships in the schools.

To achieve this purpose, we are requesting your help in responding to the following questions. It is very necessary that you answer all of them as honestly and completely as possible.

The first question, which deals with significant classroom practices you may be trying, may be publicized with your permission. The remainder of the questionnaire, including all the information about your feelings and the feelings of others, will be absolutely confidential. Only the University of Michigan research staff will see this material.

Please seal this questionnaire in the attached envelope and return it to the liason teacher in your school. Please do this prior to May ____.

Thank you for your help.

Name ______________________________ School __________________________

1. We are interested in significant classroom practices for improving pupil learning or motivation to learn. Are you trying any procedures or techniques to accomplish this in your classroom? Yes ____ No ____

If No skip to question 7

A. If yes: How many are you trying? a lot____ some____ a few____

How much time and energy do you spend in these activities?

a lot____ some____ a little____

B. Please describe the most significant one of these practices. What specifically did you do?

What kind of problem regarding pupil learning were you trying to solve?

Does it require any special training, preparation or equipment?

Were there any special difficulties or operating problems? If so, what?

What were the pupils' reactions? What pupil behaviors changed?

2. Are you likely to use this practice you just described again?

Yes ____ No ____

3. The classroom practice you just described can be "original with you" (i.e., you invented it) to "got it from somewhere else." Please check on the line below the position that best describes your practice.

original with me (to the best of my knowledge)	got it somewhere else and made major changes	got it somewhere else and made minor changes	got it somewhere else without making any changes

4. If not totally original, where did you get it (check as many as apply)?

Teacher in this school ____

My principal ____

Text or journal ____

Teacher in another school ____

Outside consultants or university ____

Other ______________________________
(Please specify)

5. How did you hear about it (check as many as apply)?

Conversation ____

Observation ____

Demonstration ____

Conference ____

Written report ____

Other ______________________________
(Please specify)

6. As far as you know, to what extent is the practice you described being used by other teachers?

a great deal ____ to some extent ____ a little ____ not at all ____

How often in the past year have you told other teachers about this particular classroom practice?

never ____ once or twice ____ a few times ____ often ____

7. To what extent do you know what significant practices other teachers are using to improve pupil learning in their classroom?

know a lot ____ my knowledge is limited ____ have some knowledge ____

don't know what others are doing ____

8. We are interested in significant classroom practices for improving pupil learning or motivation to learn. On this roster of staff members of this school please indicate any significant classroom practices you know teachers are using or have used. Please write a brief description of the practice next to each teachers' name if you can.

9. Would you say that a young person who is now in grade school or high school, is getting as good an education as young people did thirty (30) years ago, a better one, a worse one, or what?

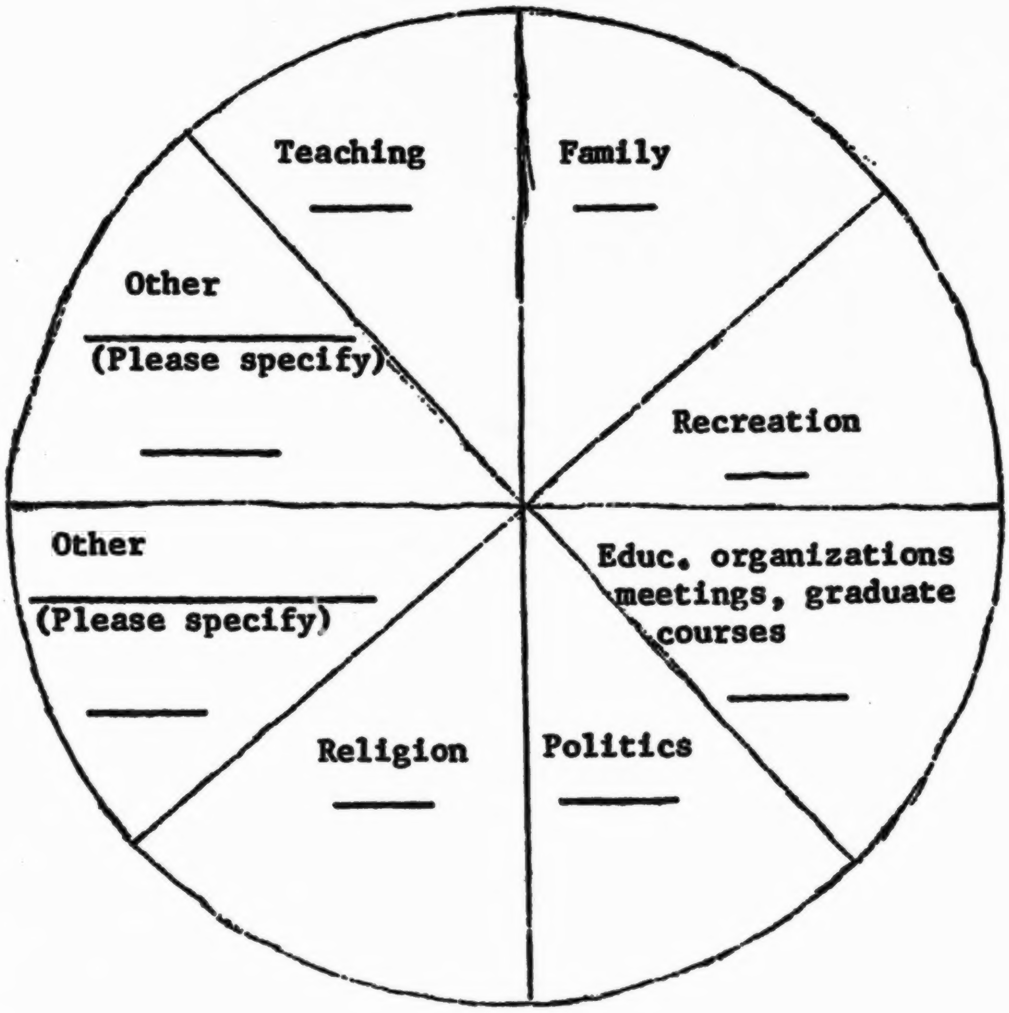
A. In what ways are things better now?

B. In what ways were things better then?

10. One way of viewing the objectives of a school system is to look at the things the schools in it emphasize the most. Each of the four hypothetical schools listed below emphasizes a different aspect of education. In column A please place a 1 next to the one that is most like your school, and a 4 next to the one that is least like your school. In column B please place a 1 next to the school which would, in your opinion, be the most desirable or "ideal," and a 4 next to the school which would be the least desirable.

	A Most Like my School	B Most Desirable or Ideal
School #1 feels that the most important task of the schools is primarily intellectual; that is, to provide children with information about many things, teach them reading, writing and arithmetic, give them the ability to figure things out for themselves, and a desire to learn more.	______	______
School #2 is primarily interested in social things; that is teaching children how to get along with others, to know about people in other countries, and to be good citizens who are loyal to America.	______	______
School #3 is concerned with the personal development of students; that is, seeing that they possess a sense of right and wrong, develop into mature and stable persons who are in good physical condition, and learn to enjoy things like music and hobbies.	______	______
School #4 is most concerned about the more practical things; that is, helping students choose the right occupation or college, giving them specialized job training, and preparing them for marriage and family living.	______	______

11. Teachers are usually involved in many different activities. Please indicate below the amount of time you devote to various interests and responsibilities. Within each "slice" of the pie put the approximate number of hours that you spend on each of these responsibilities in the average week.


Teaching ____
Family ____
Other ________ (Please specify) ____
Recreation ____
Other ________ (Please specify) ____
Educ. organizations meetings, graduate courses ____
Religion ____
Politics ____

A. If you could change the way you now spend your time, what would be the most important change you would like to make?

B. Do you find any of the above activities conflicting with each other?

Yes ____ No ____

If Yes, which ones?

12. The following statements describe the feelings of some people. Please check the column which indicates whether you strongly agree, agree, disagree, or strongly disagree with each of these statements:

	strongly agree	agree	disagree	strongly disagree
1. I have a working plan and schedule which I follow carefully.				
2. In the history of mankind there have probably been just a few really great thinkers.				
3. With everything in such a state of disorder, it is hard for a person to know where he stands from one day to the next.				
4. Though people might not admit it, they are out for all they can get.				
5. Most people just don't give a "damn" for others and are ready to use any means to get to their goals.				
6. People should do what is morally right regardless of the consequences.				
7. My blood boils whenever a person stubbornly refuses to admit he's wrong.				
8. Once I get wound up in a heated discussion I just can't stop.				
9. It's only wishful thinking to believe that a person can really influence what's happening in society at large.				
10. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.				
11. I often wonder what the meaning of life really is.				
12. I usually maintain my own opinions even though many other people may have a different point of view.				
13. Learning democratic values is as important to me as learning subject matter.				

	strongly agree	agree	dis-agree	strongly disagree
14. I personally feel a need to believe in some sort of religious faith or philosophy.				
15. I often become so wrapped up in something I am doing that I find it difficult to turn my attention to other matters.				
16. Sometimes, I feel all alone in the world.				
17. In the long run the best way to live is to pick friends and associates whose tastes and beliefs are the same as one's own.				
18. I don't enjoy having to adapt myself to new and unusual situations.				
19. The principles I have come to believe in are quite different from those believed in by most people.				
20. A person who gets enthusiastic about too many causes is likely to be a pretty "wishy-washy" person.				
21. An ethical or moral principle which may be right in one situation may be wrong or inappropriate in another situation.				
22. The trouble with the world today is that most people really don't believe in anything.				
23. We should spend less time trying to find new ways to handle delinquency and emphasize time tested techniques which seem to be forgotten.				
24. Science is a good thing even if it challenges fundamental things.				
25. The ways of the past are hardly ever adequate to handle present day problems.				
26. The teachers' union is likely to do more for the improvement of education than is the National Education Association.				
27. Most teachers are capable of running this school by themselves if they have to.				

13. Finally, we would like some background information about yourself.

A. Sex: Male ____ Female ____ Age ____

Race: Caucasian ____ Negro ____ Mongoloid ____

Marital status: Single ____ Widowed ____

Married ___ Divorced ___

How many children do you have? ______

How old are they? ______________________________

B. Where do you live (name of town)? ________________________

How long have you lived there? ___________________________

How long does it take you to get to school each morning? ________

How do you travel to school? ______________________________

With whom do you go to school? ___________________________

C. Where were you born (name of town)? _______________________

Have you ever lived on a farm? ____________________________

If yes, between what ages? ____________________________

Where did you spend most of your life: rural___ town___ city___

Where did you go to school (name of town(s)) _______________________

____

What college or colleges did you go to? __________________________

____

How many years of college have you completed? ___________________

Highest degree held _________________________

Number of credit hours beyond degree _______ Specialty ___________

Are you teaching in the specialty for which you were trained? _______

If no, please explain ____

____

D. If married, or ever married, what is (was) your spouse's occupation?

____

What was your father's occupation? ____________________

What was your mother's occupation? ____________________

Do you have any other job for pay now? ____ If so, what? ______

____

What would you like to be doing in ten years? ______________

____

E. What is your religious preference? (specify) ____________________

If Protestant, would you regard yourself as a:

____ Fundamentalist ____ Neo-Orthodox

____ Conservative ____ Liberal

____ These catagories are not clear to me.

About how often do you attend religious services?

once a week ____ once a month ____ never ____

more than once a week ____ a few times a year ____

F. Do you usually think of yourself as a

Republican ____ Independent Republican ____ Other __________

Democrat ____ Independent Democrat ____

G. What grade or subject do you teach? ____________________

How long have you taught this grade or subject? ______________

How long have you taught in this school? ______________

How many years of teaching experience have you had? __________

Do you have tenure? Yes ____ No ____

Are you teaching in more than one school? __________

If yes, please explain ____________________

____

Will you be in this school in the fall? ____________

If no, why? ________________________________

____

H. Do you have school duties in addition to or other than classroom teaching?

Yes _____ No _____

If yes, please explain ________________________________

____

Do you serve on any school or school system committees? ________

Which ones? ________________________________

____

Appendix A

Teacher Instruments

Institute for Social Research, University of Michigan
Michigan Department of Classroom Teachers
Belleville, Brighton, Chelsea and Romulus School Districts

Part I

The purpose of this questionnaire is to gather information about significant classroom practices that relate to the improvement of learning, to understand teachers' feelings and opinions, and to gain a better understanding of relationships in the schools.

To achieve this purpose, we are requesting your help in responding to the following questions. It is very necessary that you answer all of them as honestly and completely as possible.

All the information about your feelings and the feelings of others will be absolutely confidential. Only the University of Michigan research staff will see this material.

When you have finished, please give your form to the liason teacher in this building.. He or she will seal all of these questionnaires and mail them to the Institute for Social Research.

Thank you for your help.

Name ______________________ School ______________________

1. A school system cannot be all things to all people. Considering the staff in your school system, the financial support for the system, the kinds of children who attend the schools, and the attitudes of the community, what would you feel are the four primary objectives towards which effort should be put in your school system during the next two years? Put "1" by the most important, "2" by the next most, "3" by the next most important, and "4" for the next most important. Remember, you are thinking of objectives for this school system for the next two years. Use only the numbers 1, 2, 3, 4 to show the four objectives you feel are primary. Leave the other items blank.

____ Reducing the dropout rate.
____ Improving attention to basic skills in the first three grades.
____ Improving attention to physical health and safety of students.
____ Increasing children's motivation and desire to learn.
____ Improving learning opportunities for disadvantaged children.
____ Increasing the percentage of college attendance by seniors.
____ Improving discipline and the behavior of "difficult" children.
____ Improving the quality of student academic achievement at all levels.
____ Improving children's adherence to moral, ethical, and patriotic standards.
____ Improving learning opportunities for gifted or talented children.

2. Most teachers spend their time doing many different tasks at school. How do you spend your time during the average school day?

	a great deal	some	little	none
a. Teaching students academic material.	____	____	____	____
b. Disciplining students	____	____	____	____
c. Counselling students	____	____	____	____
d. Keeping records and administrative duties	____	____	____	____
e. Serving on committees	____	____	____	____
f. Talking with colleagues about classroom practices	____	____	____	____
g. Other (Specify)____________________	____	____	____	____

3. Now go back over the different kinds of activities in question 2, and list the letter of those on which you would like to spend more time, in order of preference for you.

Prefer most ____ Prefer next most ____ Prefer third most ____

4. Here is a list of possible teachers' organizations; please check whether or not you would be interested in joining any of them, and how much out-of-school time per month you would devote if interested.

	Interested (Yes or No)	Time per month
a. An organization concerned with curriculum development	_____	_________
b. An organization with a definite program for sharing significant teaching practices	_____	_________
c. An organization to advance the priority of education as a national responsibility	_____	_________
d. An organization to advance social activities among teachers, principals and administrators	_____	_________
e. An organization to influence school policy (goals, class size, etc.)	_____	_________
f. An organization concerned with teachers' salaries and benefits	_____	_________
g. An organization which offers opportunities for further educational training	_____	_________

5. Do you belong to any educational groups, associations, or organizations that have regular local, state, or national meetings? Please list those you belong to, if any, and how often you attend meetings.

Name of Organization	Attendance (1) every meeting (2) often (2) sometimes (4) rarely
None _________	
______________________________________	_______________
______________________________________	_______________
______________________________________	_______________
______________________________________	_______________
______________________________________	_______________

6. Do you attend any educational meetings out of your school system?

Yes _____ No _____

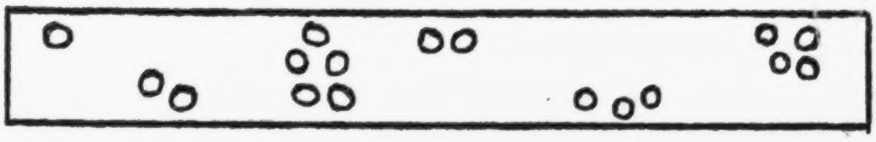
7. The following statements describe the feelings of some teachers. For each statement, please check the column which best describes the extent to which you feel this way ... whether you almost always, often, sometimes or very seldom feel this way.

	almost always	often	sometimes	very seldom
1. I do things at school that I wouldn't do if it were up to me.				
2. I find my job very exciting and rewarding.				
3. In the long run, it is better to be minimally involved in school affairs.				
4. I feel close to other teachers in this school.				
5. I have a lot of influence with my colleagues on educational matters.				
6. Some school regulations have to be disregarded.				
7. What the principal thinks is very important to me.				
8. I really don't feel satisfied with a lot of things that go on in this school.				
9. The position of teachers is getting better not worse.				
10. Though teachers work near one another, I feel as if I am on an island by my self.				
11. Some things I do here don't make much sense to me.				
12. At this school, it is not important how much you know; it is whom you know that counts.				
13. I feel involved in a lot of activities that go on in this school.				
14. No longer can a teacher build his hopes on solid grounds, and the future is dreadfully uncertain.				
15. What my colleagues think is very important to me.				
16. I feel some basic things need to be changed for this school to improve.				

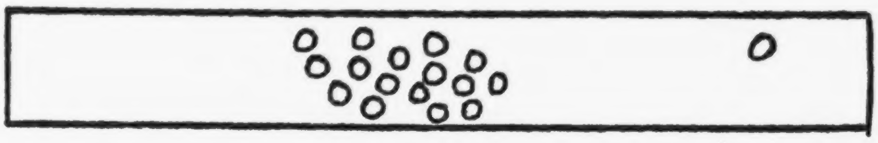
	almost always	often	some-times	very seldom
17. As far as I know, I am well liked by my colleagues.				
18. This community shows real concern with education.				
19. I am just a cog in the machinery of this school.				
20. A strong local teachers' organization could improve things in this school.				
21. I tell other teachers what I am doing in my own classroom.				
22. Social workers or psychological counselors are an important addition to the teaching staff of this school.				

8. If you were to look at this staff of teachers as a group, which one of these drawings would most nearly look like this staff?

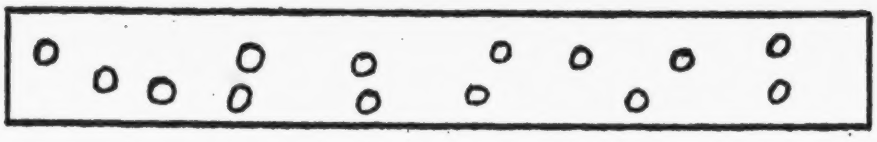
a. ____



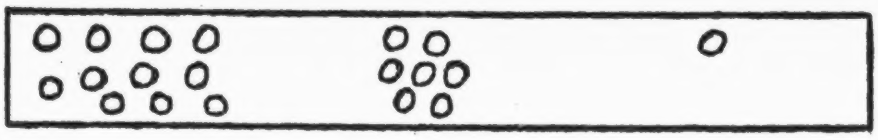
b. ____



c. ____



d. ____



e. ____ Other - please draw

9. Now go back over the drawing you selected in 8, and place an "X" within the circle that best represents your position in the drawing of this staff.

10. In general how much influence do you think the following groups or persons have in determining educational matters (e.g., curriculum, policy, etc.) in this school. Place a check in the box that best describes the influence ability of each of a--f.

	no infl.	a little infl.	some infl.	a great deal of infl.
a. The local school board				
b. Your superintendent				
c. Your principal				
d. A small group of teachers				
e. Your teaching colleagues in general				
f. You, personally				

11. In your opinion, how much influence should each of these groups or persons have in determining educational matters (e.g., curriculum, policy, etc.) in this school. Place a check in the box that best describes your feelings about the desirable influence of each of a--f.

	no infl.	a little infl.	some infl.	a great deal of infl.
a. The local school board				
b. Your superintendent				
c. Your principal				
d. A small group of teachers				
e. Your teaching colleagues in general				
f. You, personally				

12. The following statements describe typical behaviors that may occur within any school. Please indicate to what extent each of these descriptions characterize the climate of your school ... whether they almost always, often, sometimes or very seldom occur.

	almost always	often	sometimes	very seldom
1. Routine administrative duties interfere with teaching.				
2. The curriculum makes it difficult for teachers to spend time on activities that interest them most.				
3. Teachers can achieve their educational goals only if they "fit in" as persons.				
4. Teachers have ideas about the school which they don't express in public.				
5. Teachers are expected to adjust to the school system rather than change it.				
6. Teachers who don't "fit in" are rejected.				
7. Teachers visit each other socially at home.				
8. Our teaching staff has a high esprit de corps.				
9. Teachers talk about their personal life with other faculty members.				
10. Teachers work on classroom problems with one another.				
11. The curriculum encourages teachers to use the simplest teaching methods.				
12. The principal is satisfied with the way teachers perform here.				
13. The principal encourages and supports new ways of teaching.				
14. Staff meetings are used for administrative matters.				
15. The principal encourages continued professional training.				
16. Teachers are very critical of one another.				
17. The principal does most of the talking in staff meetings.				

	almost always	often	sometimes	very seldom
18. The principal demonstrates a warm personal interest in the staff members.				
19. The principal seeks suggestions from teachers.				
20. The principal checks closely on teachers' classroom performance.				
21. Teachers call the principal by his first name.				
22. The principal allows teachers to violate minor rules.				
23. Teachers feel that it is alright to ask the principal for help.				
24. The principal has ample time for conversation with teachers.				
25. The principal consults with teachers before making major decisions at school.				
26. Parents show interest in what the teachers do.				
27. Relationships between the principal and teachers are formal.				
28. The principal helps teachers deal with their classroom problems.				
29. The principal brings educational literature, conferences, etc., to the attention of teachers.				
30. As school systems become more and more complex teachers become less capable of independent thinking.				
31. There is a small clique of teachers that run the school.				
32. Teachers enjoy working here.				
33. The principal calls teachers by their first names.				
34. There are pressures on teachers not to deal with controversial matters.				
35. The school is subject to a lot of community pressures.				
36. The community wants teachers to do things they don't want to do.				

13. The purpose of this question is to understand your classroom teaching style by having you describe it on a series of rating scales. It is important that your ratings accurately reflect your own feelings and impressions.

How to use these scales: If you feel your classroom is closely related to one or the other end of the scale you should place a checkmark as follows:

happy :✓:___:___:___:___:___:___:___: sad

or

happy :___:___:___:___:___:___:___:✓: sad

If you feel your classroom is less closely related to one or the other end, you should place your checkmark on one of the lines closer to the middle.

Do not spend too much time deliberating on any one of the scales, but give your first impression and work rapidly. If you teach more than one class, consider the most characteristic one of those you teach this year in rating these scales. Please use only one checkmark for each rating scale.

The words at each end of some of the scales may seem equally relevant to you. In this case please choose the end of the scale that has the highest priority for you.

A. Place a checkmark on the space that you believe best describes your classroom as it actually is.

MY CLASSROOM AS IT ACTUALLY IS

friendly :___:___:___:___:___:___:___:___: business-like

individual activities :___:___:___:___:___:___:___:___: group activities

planned :___:___:___:___:___:___:___:___: spontaneous

active :___:___:___:___:___:___:___:___: passive

relaxed :___:___:___:___:___:___:___:___: attentive

formal :___:___:___:___:___:___:___:___: informal

feelings controlled :___:___:___:___:___:___:___:___: feelings expressed

pupil planned :___:___:___:___:___:___:___:___: teacher planned

lecture :___:___:___:___:___:___:___:___: discussion

cooperative :___:___:___:___:___:___:___:___: competitive

B. Now please place a checkmark on the line that best describes your classroom as you would like it to be.

MY CLASSROOM AS I WOULD LIKE IT TO BE

friendly :___:___:___:___:___:___:___:___: business-like

individual activities :___:___:___:___:___:___:___:___: group activities

planned :___:___:___:___:___:___:___:___: spontaneous

active :___:___:___:___:___:___:___:___: passive

relaxed :___:___:___:___:___:___:___:___: attentive

formal :___:___:___:___:___:___:___:___: informal

feelings controlled :___:___:___:___:___:___:___:___: feelings expressed

pupil planned :___:___:___:___:___:___:___:___: teacher planned

lecture :___:___:___:___:___:___:___:___: discussion

cooperative :___:___:___:___:___:___:___:___: competitive

C. This part is concerned with your interpersonal relationships with your teaching colleagues. The descriptive words or pharses at each end of the rating scales are not necessarily opposites. Please place a checkmark on one of the lines near the end of the scale that best describes how you would like your relationships to be with your colleagues.

MY RELATIONSHIPS WITH MY COLLEAGUES IN THIS SCHOOL
AS I WOULD LIKE IT TO BE

influential :___:___:___:___:___:___:___:___: likeable

be a leader :___:___:___:___:___:___:___:___: achieving personal goals

gaining friendship :___:___:___:___:___:___:___:___: be a leader

competent :___:___:___:___:___:___:___:___: influential

likeable :___:___:___:___:___:___:___:___: achieving personal goals

competent :___:___:___:___:___:___:___:___: gaining friendship

14. The following questions concern some important interpersonal relations within this school staff. Your answers are absolutely confidential. Use the roster on the following page to provide the identification numbers requested.

Identification Number

A. Please list the identification number of the three teachers you communicate with most about teaching.

Communicate with most ______

Communicate with next most ______

Communicate with third most ______

Identification Number

B. Please list the identification number of the three teachers you feel are most influential in developing staff opinion about education matters (e.g., curriculum, school policy, etc.)

Most influential ______

Next most influential ______

Third most influential ______

Identification Number

C. Please list the identification number of the three teachers you feel are the most competent and effective classroom teachers.

Most effective ______

Next most effective ______

Third most effective ______

Identification Number

D. Please list the identification number of the three teachers you like the best.

Like most ______

Like next most ______

Like third most ______

Staff Roster

Please use the identification numbers on this roster for nominating members in the preceding question (number 14).